SCHOOL AND SOCIETY

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SCHOOL AND SOCIETY

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Volume 42 SATURDAY, NOVEMBER 16, 1935 Number 1090

THE SOCIAL IMPULSES OF YOUTH

By Dr. HARRY H. MOORE

BRONXVILLE, N. Y.

"I HOPE to bring about the reform of all corruption in politics." Thus writes a third-year high school boy in a city of Indiana. "When I was about twelve," he explains, "I began to see the worst side of small town politics. My uncle was mayor, one of the most honest men that ever held office. However, when he was persuaded to run for a second term the wets and the bootleggers tried to win him over. They failed and then they defeated him." This boy proposes to go to college and law school, "and then after getting a little headway in the profession, mix in local politics, all the while preaching reform." He says in conclusion, "If I shall have turned the tide toward better government ever so slightly, I will feel I have accomplished something worthwhile."

This and many similar statements were obtained in the late spring of 1933 by the United States Office of Education and the present writer, from 3,769 third- and fourth-year high-school students, living in 32 cities and towns of the United States. The inquiry was made after the experience of a similar study in 1919.[1] At that time, replies were obtained from 975 third- and fourth-years students living in 16 representative localities. Both in 1919 and 1933, the answers bear evidence of having been prepared with earnest interest. The students did not write to please their teachers. They were told in advance that an honest "no" would be just as valuable for the purpose of the inquiry as the answer "yes"; furthermore, they were assured that no one in the school would see their replies.

[1] Harry H. Moore, *The Educational Review*, 59: 271–295, April, 1920.

I

The major question in the study was as follows:

> (Read this question carefully.) Previously to the present school year, did you ever have, for a period of at least several days, a strong ambition to give your life to helping certain classes of people who are suffering from poverty, ignorance, disease, vice, injustice, or crime, or in preventing these evils? (Yes or No). . . .

With one minor word changed, this is the same question asked in connection with the study made in 1919. If one feels that the question is naive, one should remember that the thoughts of youth about social and economic problems are likely to be naive.[2] The words "previously to the present school year" were inserted to prevent the recording of recent, ephemeral ambitions. Those given presumably have stood the test of

[2] In neither study was any attempt made to discover subconscious motives which may underlie the social impulses, ambitions and interests of young people, or to deal in any way with their etiology. The term "social" in this connection applies to objectives and not to method. A boy or girl may have an earnest ambition to reduce poverty or disease and yet be conspicuously individualistic.

time, some of them having been remembered several years. Replies were received, as will be recalled, from 3,769 students. Of these, 66 per cent. responded "Yes." The following table gives the results for the recent study and for that of 1919.

	No. answering "Yes" 1933	Per cent. answering "Yes" 1933	Per cent. answering "Yes" 1919
Boys	1,016	58	47
Girls	1,482	73	69
Total	2,498	66	59

On the assumption that the mere answer "Yes" might have little significance unless it is accompanied by information regarding the ambition, a computation was made in the recent study to determine how many replied "Yes" and also gave information regarding the nature of their ambition, and what led them to have it. It is found that when this test is applied, almost as many students appear to have had social impulses—specifically 64 per cent.

If the objection is made that such assertions lack real importance unless they are supported by evidence that the students have actually done something to assist others, we may check this result by determining to what extent these students replied satisfactorily to two other questions:

(a) During the present school year, what charitable, religious or social work have you done without money compensation?

(b) During the present school year, approximately how much of your own money (what you can spend as you like) have you given to charitable, religious or social work?

When this test is used, it is found that approximately one half of the students may be said to have had valid social impulses. More specifically, 51 per cent. reported social ambitions, gave additional data of significance regarding those ambitions and also reported one or more kinds of charitable, religious or social work, or the donation of money, or both work and donation.[3]

[3] See Sec. VI, p. 662 *et seq.*

Before discussing the ideas of those giving affirmative answers, brief reference may be made to a few statements offered gratuitously by those who responded "No." "I have thought a lot about such things," writes an eighteen-year-old boy in a western high school, "but I just believe that the majority of the people won't listen to any suggestions about their private lives. That is a job for some prominent person to take over, some one who has a big influence in districts. I prefer to live my own life in just as clean a manner as possible."

A girl of 19 in a mid-western city high school writes: "I have never felt an urge to be a social uplifter. I think the best thing for people who are criminals or have incurable diseases, especially if hereditary, is chloroform." A boy of 15 years of age says he has had no such impulses because people out of work "think they can live on the state." A boy of 18, who hopes to become a naval officer, writes: "I have no pity for poverty. I think each person, or family, is able to be independent, and not be a parasite." It is doubtful whether such attitudes as these are representative of even the 34 per cent. who report no ambitions to aid the unfortunate.

II

The next question was addressed to the 66 per cent. who replied "Yes," thus indicating that they had had a strong ambition to be helpful. It read as follows: "If so, state specifically, in concrete terms, just what you hoped you could do."

Of the 2,498 students who replied "Yes" to the first question, 2 per cent. failed to answer this one; 29 per cent. gave vague or unintelligent replies; 69 per cent. gave concrete answers.

Some of the vague and unintelligent answers follow.

A boy of 18 in an industrial city struck hard by the depression would "try to help every one who has ambition to have an hon-

est life." A boy of 17 in the same city had a desire two years before "to be able to abolish all gangsters and injustice."

A girl of 17, living in a small place in Minnesota, writes that at 15 she visited the slums of Chicago and had the ambition to help the people "wherever I can, and take an interest in work concerning their betterment." A boy in a mid-western city "would like to educate people and stop all crime and disease. If this were possible," he says, "there would not be any depression."

Vagueness of youthful ambitions does not necessarily indicate a lack of earnestness. A boy of 18, a senior in an eastern small town school, writes: "By constant reading I formed the notion that there was altogether too much suffering. . . . I wished that I could have helped any one in want and changed their kind of attitude." He proposes to carry out this ambition by "living a glorious life, as any one should; to give my utmost service in every possible field to better human living conditions, physical and mental."

What were some of the more concrete ambitions?

Many students wanted to give clothes, food or money to the poor. A girl of 16, a junior in a large eastern high school, was accustomed at the age of 13 to visit an aunt living in a poor section of New York City. She hoped to "get enough money to go often to the homes of the poor and give them everything they required." Writing more specifically, she expresses the desire to go in person and "anonymously" and "slip about $25.00 under each door." "I would rather go personally because I have no faith in charity organizations." Later came disillusionment. "I suddenly realized that it would take so much money to do this that I have given it up." A boy of 17, living in an industrial city, had found many people picking up old food at such places as the Y. M. C. A., the Y. W. C. A. and hotels. "Many times, as many as ten are seen at one garbage can in a day." These observations were made at the age of 12, and he hoped to give food to such people.

A considerable number of girls wished to establish orphanages and similar institutions for the homeless. A girl of 16 in an eastern city, after reading "Dear Enemy" and visiting an orphan asylum, had, at the age of ten, the ambition to maintain an orphanage. "Our farm would be an ideal place," she writes. She knows where to get the children, but, she continues, "I do not know how to get them."

Several girls wanted to clean up dirty children. A junior high school girl in the Middle West saw a small boy running around the streets begging. "He was ragged and dirty. He had with him a dog which was also dirty, but nevertheless, he was cleaner than the boy. The sight of this poor child made me shudder, and I wondered how a person could ever stand being so filthy." She wanted to teach the meaning of cleanliness to people living in the slums.

A number of students were desirous of helping some young friend or older person. One girl hoped to make a man stop drinking, and another wanted "to make a man of some one who was down and discouraged." In the majority of cases their interest is in another young person. For instance, a boy became acquainted with a schoolmate who belonged to a bad gang, from whose influence the boy tried to save him. "I even took him home to play cards with other fellows of our age. It was not long before we became great pals, and he thanked me the day I moved away for what I had done for him."

Considerable originality is in evidence in some replies. A boy of 16, observing a year before an imbecile child in the neighborhood, hoped through education to prevent inbreeding and thus lessen the number of morons. A boy of 17, living in a small town, wanted at 14 to establish a "model farm to

aid farmers. Another boy of 17, living near a railroad, wanted to "put wandering men and boys to work so they could remain in one place."

A great many boys were ambitious to wipe out gangsters and crooked politicians. Dishonest bankers incurred the wrath of one boy of 19 living in the suburbs of a large mid-western city. Two years before, he had a desire which he has not yet forgotten "to throw every crooked politician and banker out of office." Another boy wanted "to aid in cleaning out racketeers and crooked officials."

III

"About how old were you when you first had this ambition?"

The answers to this question have been tabulated; but they have somewhat questionable significance, primarily for the reason that ambitions developing during the present school year were not requested. (This precaution was taken, as may be remembered, to discourage the recording of ephemeral interests.) The results tend to show that in a few cases boys and girls remember interests in poverty and other social problems occurring before the age of 7, in more cases between the ages of 7 and 10, and in even more instances at 11 and 12; and that the number increases markedly at 13 and 14, and thereafter. Such results of course, might have been expected.

The tabulation also shows that the girls develop social interests considerably earlier than the boys. For instance, 10 per cent. of the girls report an interest in the unfortunate occurring in the 7- to 10-year-age period, and only 6 per cent. of the boys.

IV

What proportion of these 2,498 boys and girls who had social impulses abandoned them?

Of the boys, 26 per cent. did so, and of the girls 30 per cent. In the study of 1919, the percentages were 33 and 41, respectively. These results may possibly justify the conclusion that, while a larger proportion of the girls have social ambitions, the boys are more likely to retain them.

Why, now, did approximately one third give up their social ambitions? The replies reveal a large variety of reasons difficult to classify. A considerable number frankly say that they lost interest, and a few reply with equal frankness that they were too selfish. In the former group is a girl of 18 who wrote, in regard to the poor, "They do not seem to appreciate what is being done to help them. . . . I lost all my ambition when I saw their behavior." A boy of 17 had hoped, at the age of 13, that he might become a medical missionary. He has given up this plan because he "became so intensely interested" in electricity. One student had had an attack of scarlet fever at 15, which stimulated a desire to "aid hospitals," but now he writes, "I haven't time for reflection under the same circumstances."

Among the students who found themselves too selfish were several who had planned to become missionaries of one kind or another. One girl of 16 apparently had retained the ambition for some three years and then, she writes, "about a year ago I finally decided that it was not my vocation because I hated the thought of giving up all I would have to." One girl who wanted to be a nun and work in China or Japan concluded that there were "other ways of doing good." She says that she is "not so idealistic now as then"; she continues, "I desire to live a full life, and having my head chopped off at an early stage is not conducive to the realization of my ambition."

A considerable proportion of students feel the lack of ability. A boy who had hoped to become a doctor believes that he does not have the patience, or the "mental stamina" needed; and a girl has given up the idea of lecturing and writing to im-

prove social conditions, feeling that she is not sufficiently gifted for this work. Lack of funds seems to have prevented a number from entering the medical vocations. Thus a girl of 17 writes that because her mother is sick at home, and she is needed there, her father has decided that she can not go to a nurses' training school. And a boy of 17 who had wanted, five years earlier, to become a country doctor has given up this plan because of "the expense of a doctor's education, the long years of work in medical schools and the intense service and low wages." Here, as in many cases, a combination of reasons has led to the abandoning of an ambition to help.

A few students seem to have become a little cynical. Thus, one girl, who at 15 had wanted to help the foreign-born, says that she has given up that idea because "most families object to being told how to better sanitary conditions." A boy no longer wants to help the needy because he "learned that a man is what he makes himself." And a girl observed that "many of them are contented in their environment."

In reading the replies, one has a feeling that the naive ambitions of these boys and girls might be developed into intelligent interests, if they were cultivated; but they find their plans impracticable or feel helpless in trying to carry them out, or they do not seem to know why they have abandoned them. Thus, a girl was aroused by a book to a real interest, apparently, in prison conditions. Then she was told that the book did not describe the situation accurately, and she decided her efforts were not needed. A boy became discouraged because "it is almost impossible to do anything to-day without money." A girl writes that "the corrupt manner in which the charities are run makes me less anxious to help." Another student seems to have become discouraged by his continued observations of poverty and injustice, and decided it was a "useless ambition as I see the increase in these things." A girl of 17 gave up her plans because "I found myself pretty much alone in my ambition." The replies of many seem to indicate that that they had little or no encouragement, that no one helped them to understand the conditions which they wanted to remedy.

V

The larger group of students who said they had retained their social ambitions (over two thirds of the 2,498) were asked. "If you still have this ambition just how do you propose to carry it out?"

A majority appear not to recognize a need for educational preparation. In giving their answers they may have assumed that training would be necessary; it is more likely that they thought nothing about it. They give general or naive replies or no answer at all. In this majority group are many who, apparently without thought of preparation, would carry out their ambitions by engaging in various forms of service. One girl would help "by going to see the people and encouraging them, but not doing so too openly so as to injure them." Another plans "to work with welfare organizations at certain times and give as much as I can." A boy proposes to "donate as I can, help distribute clothing to poor and needy of the city." A considerable number seem to rely entirely on giving money. A girl in a rural community says that she doesn't know how to proceed; she continues, "I will have to have a lot of money before I can even think of it." A girl in the Middle West plans to "start singing over the radio and make enough money to care for at least one family"; and another girl writes, "When I start working I am going to give money to charity and help some people whom I personally know."

Among this large number of young people who do not perceive the need for systematic preparation are those who rely on a vague kind of good citizenship as a means of carry-

ing out their ambitions. Says one boy, "In no way that I now see can I do anything to aid in bettering the suffering, except by voting when my time comes to vote. Until then I shall be tolerant." A girl writes, "I propose, when I become of age, to exert my influence, in the best way possible, through my right as a citizen to vote." A few replies in this majority group show originality. For instance, a boy in an industrial city would ship those who are not ambitious to an island where they would have to get their own firewood and shelter. Another boy, who had lived in Bolivia for nine years and had observed the oppression of the inhabitants by other South American countries, hopes to become an "aviator and teach the Bolivians the subject of aviation." A girl does not know how she can carry out her ambition unless, she writes, "I marry a millionaire." A great many seem not to know what to do. A boy of 17 is ambitious to wipe out crime. But, he writes, "I frankly do not know just how yet." Another youth of the same age had observed people begging and hoped for a lot of money "to give away to every poor person in the country." He concludes, "I wish I could figure some way, but I don't know how."

A substantial proportion of these socially minded students, perhaps a third, hope to prepare themselves for social usefulness by getting an education. Many of these are boys and girls who plan to enter medicine, nursing, education, law and other professions. To them the road ahead is relatively clear—a professional education and then service in the calling of their choice. Some of these students are quite specific. Thus one boy who proposes to become a lawyer hopes he will thereby have a chance "to soak the rich and spare the poor." A girl plans a career of music and hopes to start a school in which she can "teach poor children who can not afford the luxury of learning music."

A considerable number appear to recognize the importance of a general education; the first step they would take in carrying out their social ambitions is to continue their own education. Only a very few—3 per cent. in the present study and 2 per cent. in the earlier one—appear to see any need of preparing themselves by studying the social sciences. Why a larger number do not is a question for thoughtful consideration, especially when so many persons in public life are attempting to solve our social, economic and political problems without even an elementary knowledge of the basic subject-matter.

VI

Other indications of the social spirit among youth were revealed by the inquiry. One question was formulated as follows: "During the present school year what charitable, religious or social work have you done without money compensation?" Over 50 per cent. of the students report such work.

A senior high school boy living in a New Jersey City spent the summer of 1932 in New England, where he became well acquainted with "several of the native boys." He returned the following spring and "found that conditions were awful among many of the native families." One of the New England friends, a boy about 17, after an attack of scarlet fever, had developed tuberculosis largely because of insufficient food and clothing. He continues, "We, some friends of mine who live in the city and I, try to send all the clothing we can spare, and we are trying to see that he gets all the eggs, milk, tonics, etc., that we can give him. Of course our money is not as plentiful as it once was and we can't do as much as we really would like to."

Much of the work has consisted of the distribution of food, clothing and other materials. A substantial proportion of students have participated in entertain-

ments. A number of the girls have cared for the sick. Scouting seems to have been responsible for a little of the social work done.

The answers to this question do not vary greatly, or reveal much originality. Yet much of the work may have been carried on with considerable earnestness. The girls were more active than the boys. One danced for charity; another "helped to clothe a poor child whose father was unemployed"; another "helped a settlement worker on a playground," and a fourth participated in a Red Cross drive. Others give similar replies.

Among the boys, one writes that "a group of us gave a dance for the benefit of a Visiting Nurse Association." Here is one who taught a Sunday-school class, another who played an organ in church part of the time, a third who helped clean up the church grounds and remove ashes. Another "worked around a small farm for a woman." Several boys appear to have helped in providing baskets of food at Christmas time.

The contribution of money made by students was considerably less than their contribution of work. Following the question above, the students were asked, "During the present school year, approximately how much of your own money (which you can spend as you like) have you given to charitable, religious or social work?"

About 65 per cent. report having given something. Possibly others failed to make a report, feeling that the amount was too trivial to mention. A large majority gave $5.00 or less, a few over $5.00 and a very few over $10.00. These data probably have little significance, since in a large proportion of families the young people doubtless had little to give. On the other hand, they have probably never been taught to give. The tradition that pennies and nickels are for Sunday school and for charity seems to persist, while the movies get the twenty-five-cent pieces.

The attitudes of high-school boys toward war may not indicate how much social spirit they may have, but they may perhaps reveal its quality. One of the questions in the recent inquiry, for the boys only, was formulated as follows:

Which *one* of the following statements most accurately expresses your attitude toward war? Indicate by check mark.

.....1. I would fight for my country if we go to war, regardless of the circumstances.
.....2. I would fight only if the country were invaded by a foreign foe.
.....3. I would not fight, unless compelled to.
.....4. I would not fight under any circumstances.

In considering the replies, we should remember that, among the high schools of this nation, there has not been as much agitation against war as among the colleges. We must not be surprised therefore to find that 44 per cent. of these young men would fight regardless of circumstances. But a majority show a disposition to resist—33 per cent. say they would fight only if the country is invaded; 16 per cent. only if they were compelled; and 5 per cent. say they would not fight under any circumstances.

VII

The motives which appear to govern the vocational choices of young people may throw light on the present discussion. Following a question regarding the choosing of a vocation, both boys and girls were asked:

Which *one* of the following phrases would most accurately express your real aim in choosing this vocation? (Indicate by check mark.)

.....1. To make a comfortable living.
.....2. To get rich.
.....3. To win prominence or fame.
.....4. To win power.
.....5. To get into an interesting occupation.
.....6. To get into something that is easy.
.....7. To be happy.
.....8. To better the living conditions of others.

9. To prevent or check disease, crime, poverty and ugliness.
10. To do good in the world.

A large majority, as might be expected, desire "to get into an interesting occupation" or "to be happy" or "to make a comfortable living." It must not be forgotten that most of these students are ordinary, everyday boys and girls without special capacities, whose attention will soon be absorbed with the stern business of making a living. On the other hand, of those who appear ambitious in one way or another, a much smaller number give evidence of selfish ambition than of social spirit. More specifically, while a total of 5 per cent. desire riches, prominence, fame or power, 24 per cent. report that they have chosen their vocations in order to better the living conditions of others, to prevent the social evils named or to do good in the world.

A question dealing with the ambitions of the boys in respect to the acquisition of wealth reveals results interesting in this connection. They were asked, "How much money do you think you should have saved by the age of 40?" Thirty-three per cent. desire to have accumulated varying amounts up to and including $10,000, 62 per cent. to have saved amounts up to and including $25,000. While there are 1,392 boys who replied to the question, only 15 wish to become millionaires. Perhaps they have been discouraged by the depression, and feel it would be futile to attempt to accumulate any great amount of wealth. Yet here was a chance for imaginative, ambitious boys to express anonymously their secret hopes; and only 1 per cent. reveal a desire to accumulate a million dollars or more.

Briefly, the data here set forth[4] indicate that at least a majority of this large representative group of older high-school students have been earnestly ambitious, at one time or another, to be helpful in combating or preventing crime, disease, poverty or injustice, but that their ideas are naive and are often abandoned. Of special significance is the fact that most of those having social ambitions fail to recognize the need for educational preparation. Their assertions in regard to their social impulses are well supported by evidence of actual work done to assist others. The attitude of a large number of the boys toward war reveals a kind of social spirit born of intelligence and courage. The position taken by the boys towards the acquisition of great wealth should be noted. Can it be that the American tradition is breaking at this point? Will the apparent indifference of these boys to the accumulation of material wealth continue, or will they later succumb?

Considering all the data, is there hope here for those who would displace the profit motives in modern life with something finer and productive of a more abundant life? May high-school teachers feel encouraged to believe that with improved facilities they may succeed in developing a more intelligent and a more effective social spirit among those of the rising generation?

EDUCATIONAL EVENTS

PHYSICAL EDUCATION IN FRANCE

M. ERNEST LAFONT, the French minister of health and physical education, has outlined certain projects for the organization of games, sports and physical education in France. The *London Times Educational Supplement* reports that the minister stated that he would shortly arrange a meeting with the heads of other government departments interested, presumably the ministers of national education, war, marine

[4] Additional articles based on the author's study are being prepared for publication elsewhere.

and air, as well as M. Marin, minister of state without portfolio, to discuss proposals for reform. Ultimately, a wide scheme is contemplated on national lines comparable with the organization of physical culture which has been accomplished in Germany and Italy. It is said that French opinion has been much impressed by the recent athletic meeting at Colombes between French and German teams, in which the Germans were victorious by 102 points to 48, and won the first place in every event in the program.

While complete organization will be a long and complicated task, M. Lafont pointed out that a beginning could be made in present conditions, without fresh legislation. Among the available fields for early action are the secondary schools. M. Mario Roustan, the minister of national education, has agreed to consider the fixing of a minimum amounting to one hour a day for physical culture. The minister of health will urge that school time-tables shall be rearranged in such a way that games and physical exercises may take place in the open air and on properly equipped grounds. For this purpose, he suggested, existing grounds used at present only at week ends might be brought into service. It is understood that preparations are being made to take a census of sports grounds of all kinds.

Another reform mentioned by the minister of health concerns the control, or at least the guidance, of existing clubs and federations. Many of these receive a state subsidy, and M. Lafont suggests that it should be possible to make it a condition that such organizations, besides pursuing their special sporting purpose, should institute a system of medical control, which is necessary for the proper development of physical culture, and even for sport.

THE INSTITUTE OF TECHNOLOGY OF THE UNIVERSITY OF MINNESOTA

THE Board of Regents of the University of Minnesota, meeting on October 19, put into effect a plan long contemplated when they established the University of Minnesota Institute of Technology, under which title were combined the College of Engineering and Architecture, the School of Chemistry and the School of Mines and Metallurgy, of which last the Mines Experiment Station is an adjunct.

Dr. Samuel C. Lind, director of the School of Chemistry since 1926, was promoted to the deanship of the new institute, in which position he will be at the head of the three major colleges that are included.

The change came following the retirement in June of Dean W. R. Appleby, who had been head of the School of Mines and Metallurgy since its establishment. Adjustments will be made in the work of Dean O. M. Leland, of the College of Engineering and Architecture, to conform with the new plans. Dean Lind is empowered to appoint such assistant deans as may seem necessary.

Dr. Lind was the first member of the University of Minnesota faculty to be appointed to the National Academy of Science and is one of three who now hold that distinction. He went to the university nine years ago from government service in Washington, where he was associate director of the Fixed Nitrogen Research Laboratory. He holds degrees from Washington and Lee University, Massachusetts Institute of Technology and the University of Leipzig. For many years he was associated with the U. S. Bureau of Mines, for which he has been superintendent of the Station for Rare Metals, at Golden, Colo.; superintendent of the Reno Station for Rare and Precious Metals and chief chemist of the Bureau of Mines, 1923–1925. In recent years he has worked with radium and radioactivity.

THE AUTUMN MEETING OF THE NATIONAL ACADEMY OF SCIENCES

As reported in *Science*, the autumn meeting of the National Academy of Sciences will be held at the University of Virginia, Charlottesville, on November 18, 19 and 20. Dr. Frank R. Lillie, who was elected president of the academy this spring and chairman of the National Research Council, to succeed the retiring president, Dr. W. W. Campbell, formerly president of the University of California, will preside. This is the first time in its history of seventy-two years that the academy will have held a meeting in the South. Charlottesville is the center of historic Virginia, with the homes

of Jefferson, Madison and Monroe in the vicinity. Dr. S. A. Mitchell is chairman of the local committee. Other members of the committee are: J. L. Newcomb, A. G. A. Balz, Professor Ivey F. Lewis, W. A. Nelson, Professor W. S. Rodman and F. E. Wright, *ex officio*.

Adequate hotel accommodations are available at the Monticello Hotel and at the Farmington Country Club, both of which have granted special rates to members. The original Farmington home was remodeled by Jefferson. It is three miles from the University of Virginia, but taxi service will be arranged. Farmington affords a good view of the Blue Ridge Mountains.

Complimentary luncheons will be served to members and guests on Monday, Tuesday and Wednesday, November 18, 19 and 20. The receptions on each of the three afternoons will also be complimentary to members and guests.

The provisional program is as follows:

SUNDAY, NOVEMBER 17

2:30 P. M., Meeting of the Council, followed by dinner, Farmington Country Club.

MONDAY, NOVEMBER 18

Morning, 10:00, Address of Welcome by John Lloyd Newcomb, president of the University of Virginia. Response by President Frank R. Lillie, of the National Academy of Sciences. 10:30, First Scientific Session. *Afternoon*, 1:00, Complimentary Luncheon for members and guests, including ladies. 2:30, Second Scientific Session. 4:30, Reception, to members and guests, at the home of President and Mrs. J. L. Newcomb. *Evening*, 8:15, Public Lecture in Cabell Hall by Professor Harold C. Urey, of Columbia University.

TUESDAY, NOVEMBER 19

Morning, 9:00, Tour of the University. 9:30, Business Session (for members only). 10:30, Third Scientific Session. *Afternoon*, 1:00, Complimentary Luncheon for members and guests, including ladies. 2:00, Fourth Scientific Session. 4:30, Visit to the Leander McCormick Observatory and Tea at Observatory House with Director and Mrs. Mitchell. *Evening*, 7:00, Reception by President and Mrs. Frank R. Lillie and President and Mrs. John Lloyd Newcomb, Farmington Country Club. 7:30, Academy Dinner, Farmington Country Club.

WEDNESDAY, NOVEMBER 20

9:00, Tour of the University. 10:00, Fifth Scientific Session. 1:00, Luncheon at Castalia, the home of Mr. and Mrs. Murray Boocock. 3:00, Visit to "Monticello." 4:30, Tea at Morven with Mr. and Mrs. Charles A. Stone.

CONFERENCE IN HONOR OF PRESIDENT BIZZELL OF THE UNIVERSITY OF OKLAHOMA

A SOUTHWESTERN Conference on Higher Education at the University of Oklahoma was planned for November 14, 15 and 16. According to the official announcement, these plans have been under way since last summer when members of the university faculty decided to observe the completion of Dr. W. B. Bizzell's tenth year as president of the university. The program is devoted to discussion of the problem of how the university may adapt itself to the needs of its time and region.

Dr. Bizzell, who spoke on "Higher Education in the Southwest," and Dr. Boyd H. Bode, of the Ohio State University, who spoke on "Education for Social Purposes," made the opening addresses.

The provinces and organization of higher education were discussed at the second session by Dr. Radoslav A. Tsanoff, Rice Institute; Dr. David Y. Thomas, University of Arkansas; Dr. A. B. Adams and Dr. Homer L. Dodge, University of Oklahoma, and A. Linscheid, president of the East Central State Teachers' College, Ada, and others.

At the next session the discussion was on higher education and the control of physical environment. The speakers included Dr. Homer LeRoy Shantz, president of the University of Arizona; Dr. Horace J. Harper, of the Oklahoma Agricultural and Mechanical College, and George R. Phillips, state forester. At the following session dealing with higher education and the control of social environment the speakers were Frank Ernest Hill, author, and Dr. William F. Ogburn, of the University of Chicago.

The session on November 16, according to the announcement, opened with a discussion on higher education and the training of the social technician. It was announced that Dr. Isaac Lippincott and Dr. Frank J. Bruno, of Washington University; Dr. Cortez, C. A. M. Ewing and Dr. Howard O. Eaton, of the University of Oklahoma, and Dr. H. L. Pritchett, of the South-

ern Methodist University, would speak. Adah Robinson, professor of art at the University of Tulsa, expected to lead a discussion on higher education and the creative arts. Three well-known writers, Haniel Long, John Gould Fletcher and Henry Smith; Sarah Gertrude Knott, director of the National Folk Festival, and John Ankeney, Colorado painter, were also on the program.

Governor E. W. Marland was expected to speak on "State Government in its Relationship to Higher Education," at the banquet given at the close of the conference, to be followed by Thomas H. Benton, the painter, and Dr. Lotus Delta Coffman, president of the University of Minnesota.

INSTALLATION OF THE PRESIDENT OF OHIO UNIVERSITY

FIVE hundred representatives of leading American universities and colleges and learned societies participated with state officials, alumni, faculty, and 2,600 undergraduate students in the inauguration on November 15 of Dr. Herman Gerlach James as the twelfth president of Ohio University, the oldest institution of higher learning in the Northwest Territory and the oldest university west of the Alleghenies. The inaugural address was given by Dr. Harry Woodburn Chase, chancellor of New York University.

An academic procession under the historic McGuffey Elms, planted nearly a century ago by William Holmes McGuffey, when he was president of the university, preceded the installation ceremony. The oath of office was administered to Dr. James by Dr. Thomas R. Biddle, of Athens, chairman of the board of trustees. The Detroit Symphony Orchestra, under the direction of Victor Kolar, gave a concert as the concluding event of the day's program.

President James, born in Philadelphia, comes from a family of distinguished educators. His father, the late Edmund J. James, was for sixteen years president of the University of Illinois, and his uncle, George Francis James, was dean of the College of Education at the University of Minnesota for ten years and held a similar position at the University of Nevada for another decade.

Dr. James went to Ohio University last July from the University of South Dakota, where he had been president since 1929. Prior to that he was dean of the Graduate School at the University of Nebraska. He holds degrees from the University of Illinois, and from Columbia University and the University of Chicago. In addition he has studied at Northwestern and Harvard, and abroad at the Universities of Berlin and Leipzig.

During thirteen years as professor of political science at the University of Texas Dr. James gave extensive public service in the League of Texas Municipalities, of which he was organizer and secretary. He was also editor of *The National Municipal Review* for four years, president of the Southwestern Political Science Association in 1920, and a member of the Charter Commission of the city of Austin in 1921. He has been associated with the Carnegie Institution in Washington and was a private secretary with the American delegation to the fourth Pan-American Conference which was held in Buenos Aires. He is a member of Phi Beta Kappa, Phi Kappa Psi and Phi Delta Phi.

The new president succeeds the late Dr. Elmer Burritt Bryan, who died in office in October, 1934.

THE INSTALLATION OF THE PRESIDENT OF THE UNIVERSITY OF ROCHESTER

CEREMONIES attending the installation of Dr. Alan Valentine as president of the University of Rochester took place on November 14 and 15. The presidents of Yale, Princeton, Brown, Radcliffe, Amherst, Swarthmore, Hobart and Colgate-Rochester Divinity School were expected to be present.

The exercises opened with an academic procession to the Eastman Theater. According to the program the opening address was made by Dr. William Ernest Weld, dean of the College of Arts and Science, followed by John Henry Brinker, Jr., of Evanston, Ill., president of the Students' Association of the College for Men, who spoke for the undergraduates. President-elect Valentine then delivered his response, after which the benediction was pronounced by Rt. Rev. David Lincoln Ferris, bishop of the Episcopal diocese of Rochester.

Thursday afternoon was given over to conferences of seminars at three of the schools, with

a distinguished speaker to be heard in each instance. Dr. Harold Willis Dodds, president of Princeton University, spoke in the College for Men; Dr. Ada Louise Comstock, president of Radcliffe College, spoke in the College for Women, and Dr. Simon Flexner, director emeritus of the Rockefeller Institute, at the School of Medicine and Dentistry.

Delegates and invited guests joined trustees and faculties in the academic procession to the formal induction ceremony on November 15. Joseph T. Alling, chairman of the Board of Trustees, presided at the ceremony and Dr. Albert W. Beaven, president of Colgate-Rochester Divinity School, gave the invocation. After music by the Rochester Civic Orchestra the induction address was delivered by Dr. John R. Slater, Joseph H. Gilmore professor of English. Mr. Alling then presented the customary insignia to the incoming president, after which he made his inaugural address. The exercises closed with a benediction pronounced by Dr. Clarence A. Barbour, president of Brown University. Following the installation a luncheon was given, at which the speakers included Dr. Frank Aydelotte, president of Swarthmore College, Dr. Valentine's Alma Mater; Dr. Stanley King, president of Amherst College, and Dr. James Rowland Angell, president of Yale University.

EDUCATIONAL NOTES AND NEWS

DR. W. J. KERR, who last fall was appointed chancellor emeritus of the Oregon state system of higher education, has been named director of research in production and marketing for the state system of higher education with headquarters in Portland. Dr. Kerr was the first chancellor of the new unified system of higher education in Oregon and served as head of the reorganized program from 1932 to 1935, when he was succeeded by Dr. Frederick M. Hunter, formerly chancellor of the University of Denver. Dr. Kerr previously was president of Oregon State College for 25 years. He will retain his rank as chancellor emeritus.

DR. FRED G. HOLLOWAY, for the past three years president of Westminster Theological Seminary, Maryland, was elected president of the Western Maryland College on November 8. He succeeds the late Dr. A. Norman Ward, who died suddenly on September 22 after having served as president for fifteen years.

DR. HUGO BERGMANN, formerly director of the Hebrew National University Library, was elected on November 8 rector of the Hebrew University, Jerusalem. Dr. Bergmann's successor as director of the library is Dr. Gotthold Weil, formerly head of the Oriental Department of the Berlin State Library.

DAVID H. ALEXANDER has been appointed principal of the College of Technology at Belfast, Ireland.

DR. F. E. FARQUEAR, for the past fourteen years a member of the faculty of the University of Mississippi, has been appointed dean of the school of education.

DR. S. HARRISON THOMSON, who has been a member of the faculty of history of the University of Chicago during the past year, has been appointed director of admissions and associate professor of European history at Carleton College. He has previously served as a member of the faculty at Princeton University and at the California Institute of Technology.

DR. GEORGE ERNEST HESSER, director of music for the Cincinnati public schools, has been appointed head of the department of music at the New York University School of Education. He succeeds Dr. Hollis Dann, who will receive the title of professor emeritus.

DR. EDGAR J. FISHER, of the staff of Berea College, has been appointed assistant director of the Institute of International Education, New York City. He succeeds Edward R. Murrow, who has accepted the position of director of radio talks for the Columbia Broadcasting System.

SAMUEL FAUSOLD, superintendent of the schools of Monessen, Pennsylvania, has been appointed superintendent without portfolio in the State Department of Public Instruction. He will represent Dr. Lester K. Ade, state superin-

tendent, on boards of which he is *ex-officio* a member.

IGNUS O. HORNSTEIN, for the past three years assistant director of evening schools in New York City, has been appointed director.

HARRY W. GOWANS, formerly business manager of the Tulsa, Okla., public schools, has been elected superintendent.

MISS CLARE ALICE COOLIDGE has been named assistant to Dr. D. C. Stratton, dean of women at Purdue University.

DR. WILBUR H. SIEBERT, who has been for more than forty years on the faculty of the Ohio State University, has retired with the title of research professor in history, emeritus.

DR. THOMAS I. PARKINSON, who since 1917 has been professor of legislation in the Columbia University School of Law, was elected a trustee of Columbia University on November 4.

AT a special convocation at Amherst College on November 9 the degree of doctor of laws was conferred on Dr. Nicholas Murray Butler, president of Columbia University, and on Dr. Laurens H. Seelye, who was recently elected president of St. Lawrence University.

ON the occasion of the installation on December 2 of Sir Austen Chamberlain as chancellor of the University of Leeds, the degree of doctor of science will be conferred on Sir Rowland Biffen, Sir Frederick Gowland Hopkins, Lord Rutherford and Sir Joseph J. Thomson, all of the University of Cambridge.

DR. ISAIAH BOWMAN, president of the Johns Hopkins University, was the guest of honor at a dinner given by President Jenkins Shriver of the University Club, Baltimore, on November 8. In addition to many members of the faculty, those present included: Theodore Marburg, formerly Minister to Belgium; Col. Amos W. W. Woodcock, president of St. John's College; Dr. David A. Robertson, president of Goucher College; Dr. Simon Flexner, of the Rockefeller Institute. After the dinner Dr. Bowman addressed members of the club on "Trails and Settlements of the Central Andes."

DR. WILLIAM C. BAGLEY, professor of education at Columbia University, was the guest of the State Teachers' College at Salisbury, Md., on November 8 on the occasion of its tenth anniversary. He addressed a joint meeting of the Teachers' Association of Dorchester, Somerset, Wicomico and Worcester Counties, on "A Century of Universal Education," in observance of American Education Week, and was the guest speaker at the alumnae banquet on the following evening.

THE Education Equality League of St. Louis gave on November 5 a dinner in honor of Dr. John P. Turner, Negro member of the Board of Education. Among the speakers were Robert von Moschzisker, formerly Chief Justice of the State Supreme Court; Dr. Edwin C. Broome, superintendent of schools of Philadelphia; Floyd A. Logan, president of the Education Equality League; Rev. W. L. Johnson, pastor of the Methodist Episcopal Church, and E. Washington Rhodes.

DR. WILLIAM LIVINGSTON HAZEN, founder and head master of the Barnard School for Boys, New York, was a guest of honor at a dinner given in New York on November 14 to mark the fiftieth anniversary of the school.

DR. J. W. MARTIN, professor of economics at the University of Kentucky, was elected president of the Southern Economic Association at the closing session of their annual meeting on November 9 at the University of North Carolina.

DR. FRANK L. MARTIN, dean of the School of Journalism at the University of Missouri, has been elected a fellow in the Institute of Journalists of London.

MRS. MARIA MERCEDES JIMENEZ DE MANRIQUE and Manual Negron have been named fellows from Puerto Rico to study library science in this country on a grant from the Carnegie Corporation of New York. Both are studying at the School of Library Service at Columbia University. Dorothy Cullen and Bramwell Chandler, of Prince Edward Island, likewise received fellowships from the Carnegie Corporation, and are enrolled at Pratt Institute School of Library Science in Brooklyn.

CHARLES S. DANIELSON has, at his own request, been retired from active service as bursar of Columbia University. He will be succeeded

by W. Emerson Gentzler, who has been secretary of appointments for the past five years.

DR. ADELAIDE STEELE BAYLOR, chief of the home economics service of the U. S. Office of Education, retired on November 1 from government service. Dr. Baylor had served as head of the service for thirteen years.

ALWIN THALER, professor of English at the University of Tennessee, has been appointed general editor of the newly projected pocket classic Shakespeare series to be published by the Pitman Publishing Corporation.

DR. WILLIAM YANDELL ELLIOTT, professor of government at Harvard University, addressed the first session of the annual meeting of the Academy of Political Science on November 14 in New York City. His subject was "National Powers under the Constitution."

PROFESSOR LOUIS A. PECHSTEIN, dean of the Teachers College, University of Cincinnati, addressed the Ohio State Teachers Association on October 25, at Dayton, speaking on the topic "The Community, Social Responsibility and the School." He also gave four addresses before the Kansas State Teachers Association, on November 1 and 2, speaking at Wichita and Dodge City. His topics were "Youth for To-morrow" and "Being Progressive yet Practical in Education."

DR. GREGORY D. WALCOTT, professor of philosophy at Long Island University, gave a lecture on "Philosophy and Common Sense" at Davidson College, North Carolina, on November 1, and on the following morning spoke before a group of students on "The Nature of Science."

DR. WILLIS EUGENE LOUGEE, formerly president of the Billings Polytechnic Institute, died on November 3 at the age of seventy-eight years.

DR. NATT MORRILL EMERY, comptroller and vice-president of Lehigh University, died on October 30 at the age of sixty-two years.

THE REVEREND JOHN I. ZAHM died on October 29 at the age of eighty years. He had been president of Canisius College, Buffalo; St. John's College, Toledo, and John Carroll College, Cleveland.

DR. OVANDO BYRON SUPER, for twenty-nine years until his retirement in 1913 a member of the faculty of Dickinson College, died on October 29 at the age of eighty-seven years. He was a brother of Dr. C. W. Super, president emeritus of the Ohio University.

THE National Association for Nursery Education held its sixth biennial conference from October 31 to November 2 at St. Louis. The opening session was addressed by Dr. Henry J. Gerling, superintendent of instruction of the St. Louis public schools; the Reverend Robert S. Johnston, S. J., president of St. Louis University, and Dean Frank M. Debatin, of Washington University. Dr. Mary Dabney Davis, president of the National Association for Nursery Education, and specialist in nursery, kindergarten and primary education in the Office of Education, also spoke. Among the exhibits was one depicting the trend in child development beginning with 1876. An exhibit of the Federal Emergency Relief Association showed materials and plans for setting up model nursery schools. A miniature model day nursery was shown by Mrs. Charles Behrensmeyer, of Quincy, Ill. Florida offered menus and recipes designed to promote balanced growth and the Flat River Emergency Nursery School at the O'Fallon School showed how discarded material may be used for nursery school equipment. Work done at San Juan, Puerto Rico, was shown by Dr. Pedro P. Aran, director of the education division of the Emergency Relief Administration.

A WIRELESS dispatch from Berlin to *The New York Times* dated October 30 reads: "The Nazification of German universities, which has been marked by the dissolution of all non-Nazi student organizations and the dismissal, retirement or relegation of scores of professors, was carried a step further when Dr. Wolfgang Windelband was transferred from Berlin to the University of Halle. Professor Windelband, too well known to be dismissed outright, was under-secretary in the Ministry of Education under the Republic. Professor Arnold Oskar Meyer, of the University of Munich, has been transferred to Berlin as successor to Professor Hermann Oncken, perhaps the leading German history professor, who

is among those retired by the Nazis. Karl Alexander von Mueller, recently appointed to the Reich Institute for the history of the new Germany, has now been appointed first history professor in the University of Munich."

ACCORDING to a wireless to *The New York Times*, Birmingham University has decided to establish an academic assistance fund to be used to create temporary research fellowships for scholars of any nationality displaced from their universities by reason of race, religion or politics. The vice-chancellor, Sir Charles Robertson, presided at a meeting on October 28, attended by the Lord Mayor and other prominent persons. The Chancellor, Viscount Cecil, sent a letter commending the project. Professor A. V. Hill reviewed the activities of the academic assistance council, founded within a month after the blow fell upon the Germans, 1,200 of whom he said had been dismissed from German institutions, among them some of the world's most distinguished scholars. Professor Hill pointed out that "the motive of finding exiles places is partly charitable, partly based on a belief in the international solidarity of science and learning and partly on the hatred of seeing ability wasted. There is also an element of enlightened self-interest. Just as this country profited by accepting the French Huguenots, so it has profited already by accepting scholars and scientists from Germany."

DISCUSSION

BRICKS WITHOUT STRAW

THE Hebrews held in captivity by Pharaoh many centuries ago were forced to do onerous work under the most difficult conditions; but their murmurs grew to frantic rebellion when they were compelled to make bricks without straw. To-day even that miracle is being performed (or at least attempted) by public-school teachers.

If we begin with the buildings, some will say: Ah, there surely is straw of the highest type for your use; these new buildings are tremendous in size, built for four or five thousand pupils, beautiful in design, with marble halls and auditoriums that make one catch one's breath at their artistry. What more can one ask?

Much more, I think. They are too tremendous. Who would expect four thousand people to live in one city block? Every one knows that people crowded are people in danger—danger of infection not only physical but also moral. Yet we herd that number of adolescents into one building and shake our heads with sad disapproval at the younger generation when something goes wrong. From the most delicate, sensitive girl to the most world-wise boy they are jumbled together, having to shove their way through congested, semi-dark corridors some seven or eight times a day. What price marble halls at the entrance, in the face of such danger!

When we speak of this danger, we are told that such buildings are for economy and efficiency. It is cheaper to build one large building than two smaller ones. No one can combat that argument, but strip the buildings of unnecessary show and there will be enough for two. It is ridiculous to say that we are building for the future. Progressive education has always been finding new and better ways of doing things and these fine buildings of to-day will be expensive white elephants representing too much initial cost for us to dare to scrap them when better plans come along.

MASS EDUCATION IS NOT ECONOMY

As for efficiency, the argument is that large buildings prevent duplication of such administrative positions as heads of departments. Granted that this is true, there are so many other positions created by the size of the buildings as to completely nullify that small economy. In large city schools, guidance is now divided among a dozen or more counselors—curricular, vocational, disciplinary, home-service, college, social, student-government and others. Because the school is so ponderously complex, these duties become a business affair and defeat the very purpose of guidance.

Real guidance should come not after a five-minute conference between a teacher and a student who are total strangers, but as a friendly help based on a full understanding. Under the present system, even if the teacher is wise and

willing and the child eager for advice (they are not always), there is still a wall of strangeness impossible to break down. The more sensitive the adviser the warier he is of giving advice under such handicaps as a five-minute interview and card-catalogue information.

Only in a small, well-acquainted group can be found real understanding. Big business may be efficient in the business world, but it is callous and wasteful in dealing with adolescent children. So my first plea is: Let us have no more of the schools whose only pride is their ornate size. Size does not spell efficiency.

PURPOSE OF EDUCATION IS DEFEATED

A teacher's pupil-load is based on the assumption that each teacher teaches at least five classes per day. All the counsellors are so much dead wood in the matter of pupil-load and all classes they do not teach must be dealt out to those teachers who do. The result is that a load which in statistics seems to be 29 or 30 pupils per teacher is actually well over 40—an imposible number. No teacher who really tries to accomplish much in her classes can teach two hundred or more pupils a day and teach them well.

In private schools, classes run from ten to twenty students. Each child becomes a real and vital force in the class work. How much more important is this in public school! Here the home backgrounds are far more varied, the social advantages more uneven, and necessarily the adjustments should be more delicately and carefully made. A teacher who has forty-five students to teach in forty-minute periods each day can not take many of those minutes for dealing with any one pupil. Of course she knows that the individual child is more important than the minute or than many minutes, but how can she even her account with the other forty-four?

To be specific: A boy or girl should learn to speak at ease before a group. Suppose we say that each child should speak for three minutes at least once a week—little enough surely. Yet three times forty-five means 135 minutes. Then if each student is accorded a bare two minutes of comment and criticism, there are 90 more minutes and, lo and behold, the one assignment has eaten up the entire time allowed for "English" in a week. Where are the lessons in literature or in written composition? Their time has been stolen, yet they are essential.

This is one concrete example, in itself not important perhaps but representative of problems that arise every day. The result is that whatever the teacher is doing, she has haunting her a feeling that perhaps something else is even more vital, more imperative, and that she will not have time to get to it. A sense of futility hampers her efforts, and she knows that a tone of weary irritation is just barely kept out of her voice as a student asks for extra information—there, she thinks, goes a minute already set aside for something else!

In desperation, she compromises on time and on quality. Every compromise is an acknowledgment of partial defeat, but she has no alternative. A rather cheap mould is made and all those who can be made to fit it are pushed on to the next grade.

What happens to those too dull to fit? We shut our eyes to all but the worst and with a push more or less gentle we shove them on; perhaps some one else can do more with them, we hope.

And those who are much better than the mould requires? They find it easy to fit; it takes no effort; it is painless; they accept it as *our* standard of excellence; The habit of laziness, of superficial thinking is formed easily and speedily. In a short time they resent anything which savors of difficulty. Surely there is tragedy ahead for them and for their country when this is their foundation.

Our second plea is for smaller classes.

EQUIPMENT—NOT DECORATION

In the name of economy, supplies in the public schools have been cut so drastically that we are handicapped at every turn. This is not true of the industrial courses, which are, as a rule, splendidly equipped; but in the more academic courses the equipment is hopelessly old-fashioned. Maps in any but history classes are almost unknown. Publishers' notices show excellent modern practice sheets, drill books, unusual texts; but it is impossible for our schools to order them since they are expensive and can not be used term after term. Our regular texts are worn and dirty, used until they actually fall apart. One hates to think how many germs

must be scattered over their grimy pages. Yet we may not discard them, for we know that that will still further postpone a chance of getting something more modern. Every book renewed means so much less that can be spent on additional material.

We teach current events without a magazine or newspaper in the classroom. We teach modern languages without a single chart or picture, except those the teacher may have bought herself. We teach the literature of the world, but our classrooms are bare of maps. This is economy. But, paradoxically, it is waste. Our public-school children are handicapped, cheated. Nothing can ever make up to them what they are losing to-day. Each year we are told that just for awhile we must "try to get along." We do. So do the children. They get along and are graduated.

Thousands from each city, millions throughout the country are being graduated each year, having gone through this kind of education. What will the country do with them? They must soon be among the voting population; they will make up the great weight in the number of citizens and it will be too late then to realize that they have been poorly prepared.

Our third plea is for adequate classroom material—not decoration but equipment.

IS IT POLITIC?

We are told that it is not politic to speak now; that we must wait until prosperity gets around that corner; that taxpayers will not hear of money being spent now.

We can not wait, for the children do not wait. That word "politic" sounds too dangerously like "politician." As for the taxpayer, we are tired of having him held like a threat over our heads. We know the parents of the children we teach and they are taxpayers. We are even bold enough to think we know what they want.

They want waste stopped; funds wisely administered; top-heavy officialdom simplified. And whether they have children or not, they want the children of the country to have a chance to make a fair thing of life. This is what millions of quiet, ordinary citizens want.

We teachers beg that they who have the power and responsibility will raise a cry that even politicians must hear and let us have a chance to teach America's children before irreparable damage is done.

IRENE F. NEUMANN

OLNEY HIGH SCHOOL
PHILADELPHIA, PA.

ENGINEERING EDUCATION IN NEW ENGLAND

THIS year finds the total engineering enrolment in New England institutions almost identical with that of 1934–1935. Statistics gathered in connection with the annual fall meeting of the New England section of the Society for the Promotion of Engineering Education recently held at the Worcester Polytechnic Institute indicate that there are now 5,926 engineering students in the degree-granting colleges and universities of New England, as compared with 5,957 such students last year.

It is interesting to note that engineering education in New England is as diversified as the industries which form the backbone of the wealth-producing activities in this area. There are in the New England states fourteen degree-granting institutions offering curricula in engineering, but no two are alike and each fills a distinctive place in the field of technical education at the college level. Five of these colleges, with an enrolment of 4,318 students, are located in Massachusetts.

The largest is the Massachusetts Institute of Technology with an enrolment of 2,047, 366 of whom are graduate students. New developments at the Massachusetts Institute of Technology this fall, as reported by Professor Carlton E. Tucker, include the establishment of a new four-year course in illuminating engineering, combining subjects in architecture, color and electrical engineering; the inauguration of a new five-year cooperative course in mechanical engineering leading to the degree of master of science, and to be conducted in collaboration with the various plants of the General Electric Company; and the introduction of flying experience as part of the work in aeronautical engineering for the purpose of giving students an opportunity to observe how aircraft are controlled during conventional flights.

In the department of architecture an experiment in the laboratory method will be tried with

the class entering this year. The new plan of instruction will include the selection and purchase of a suitable lot, the making of plans and specifications for a moderate-sized house, the selection of a building contractor and supervision of every step in the construction. The work will be carried out with the assistance and supervision of the faculty. Upon completion the house will be sold and the proceeds used to purchase a new location and finance the building of another house by next year's class.

Northeastern University is second in size, with an enrolment of 1,256. The college of engineering at Northeastern restricts itself to undergraduate programs which are five years in length and offered on the cooperative plan. Over three hundred engineering companies, public utilities and industrial concerns cooperate with the university in the administration of these cooperative curricula, which have been continuously in operation for over twenty-five years.

Dr. John F. Tinsley, chairman of the Community Development Committee of the New England Council, in a recent address to engineering educators on the topic, "How Engineering Education Can Assist in Meeting the Future Needs of New England Industry," said in part:

> New England industry needs the best kind of factory management, and by the same token, there is a need of broadly trained scientific men with a keen ability to analyze problems, who are willing to start at the bottom and work up in the field of factory management. For some reason, technically trained men do not seem to want to start in this manner. Perhaps it may seem to them that if they don't pursue the special lines they followed in college they will be losing an advantage. There may be a mistaken view-point that industry needs the application of the specific information obtained by college men in their courses more than the acquired ability of trained minds to "think out things."
>
> It has been my observation, however, that more college graduates object to certain conditions pertaining to factory work, such as the requirement of starting work at 7:00 A.M., the punching of a time clock, being paid on an hourly rate and being docked if late, the absence of annual vacations with pay, etc. Factory management has as fundamentals—men, machinery, materials and methods. All these have to do primarily with the shop itself, and the best place to get intimate first-hand knowledge of these essentials is in the shop. Only a relatively small percentage of the personnel connected with the supervisory and executive direction of our factories is at present technically trained. In my judgment, New England industry would be considerably improved and stimulated by an influx of new blood in the form of more technically trained men in our factories. I wonder if our engineering schools have adequate factory management courses. Are our school faculties sufficiently in touch with the needs in this field, the problems to be met, and the opportunities to be had?

The cooperative plan of engineering education at Northeastern University is one attempt to answer these questions raised by Dr. Tinsley and to solve the problems of educational-industrial relations.

Other Massachusetts engineering schools are Worcester Polytechnic Institute with an enrolment of 577, Tufts College with an enrolment of 349, and Harvard with an enrolment of 89, all of whom are graduate students. Beginning with the current academic year, the Harvard Engineering School will restrict itself entirely to graduate study. Instead of stressing the conventional divisions of civil, electrical and mechanical engineering, etc., the Harvard Graduate School will emphasize training and research in the following groups of subjects: mechanics of solids and fluids, thermodynamics, electrical power and transmission, communication, transportation, sanitation and administration.

The remaining New England states are represented by engineering colleges or divisions at the following institutions: Connecticut State College, enrolment 74; Rhode Island State College, 264; University of Maine, 363; University of New Hampshire, 339; University of Vermont, 113. All these institutions are partly or wholly state maintained. Among privately endowed institutions, Dartmouth College operates the Thayer School of Civil Engineering, which this year has an enrolment of 17, made up entirely of seniors in the college and postgraduate students; Brown University has 121 engineering students, and Yale has 214.

Norwich University in Vermont, a military institution operated along the same lines as West Point, has an engineering enrolment of 103. At Norwich there was recently established by Dr. Godfrey L. Cabot, of Boston, the James

Jackson Cabot Professorship of Air Traffic Regulation and Transportation. The income of this fund for the present will be used for a general survey of air transportation and regulation problems under the direction of a special committee of the board of trustees and for providing lectures and publications by noted aeronautic authorities. In the near future, however, it is expected that a full-time professor will be appointed and a definite course offered to students.

In addition to the degree-granting institutions mentioned above, New England has at least two technical institutes offering two-year day programs of instruction leading to technical diplomas: Wentworth Institute in Boston with a day enrolment of 480 students and Franklin Union, also in Boston, with a day enrolment of 68 students. Both of these institutes and others, including Lincoln Institute and Lowell Institute, offer extensive evening courses covering a wide range of subjects.

Thus it appears that there is no dearth of educational opportunities of an engineering nature in the great industrial states of New England. Not only can the student choose among a wide range of curricula, but also he can select his environment from among denominational or non-sectarian, state controlled or private, military or civilian, rural or urban, cooperative or full-time institutions of varying size and scope. A number of these institutions also offer exceptionally fine opportunities for graduate study.

WILLIAM C. WHITE
NORTHEASTERN UNIVERSITY

THE CORNERSTONES OF DEMOCRACY

WE made the following recommendations to the recent convocation of the University of the State of New York (and similar meetings) urging a point of view that is often overlooked in our teaching:

Democracy is on trial. What are teachers doing to combat the trend toward a dictatorship or some form of authoritarian government hostile to democracy? The older generation who have not thought this thing through are fooled by the smug appearance of school children under martinet discipline, perhaps military drill, and imagine this is character development for a democracy.

(1) Is there anything in your program enabling teachers to give more time to character education? This can not be achieved without dropping some of the highbrow topics and using the time thus obtained to develop those cooperative skills that are now largely monopolized by the predatory political gangster. Student activities, labelled extra-curricular, should come into a more dignified place and be tactfully supervised by a sponsor who has no other duties.

(2) Free speech, the cornerstone of democracy, is in jeopardy. School is the place to teach fairness in argument, persuasion—not force, and patience, as Jefferson said, "to tolerate error as long as reason is left free to combat it." Violence and personalities in debate are headed straight for fascism.

(3) These are no new ideas of my committee, but the wisdom and sober judgment of some of the wisest men that ever lived, and the democracy planned by them has not been tried. They blazed the trail 150 years ago for a perfectly new kind of public school:

> Franklin: "for public service."
> Washington: "an enlightened opinion on self-government."
> Adams: "for civic and moral duties."
> Madison and Monroe: "for government."
> Jefferson: "to know what is going on, and to make, each, his part go on right."

They wanted the schools to turn out voters not merely giving lip service to the Constitution and laws, but alive to the tricks of the politicians and bosses and keen to beat them.

The schools fell into the old rut of European standards, syntax, cube root and other frills, neglecting citizenship, and the political bosses have had their own way while there is no trained government personnel and the spoils system rules.

Are not the public schools perpetuating the very bulwark of bad government when they graduate young citizens helpless to cope with the politicians, while this program of the Fathers is little better than a misty memory?

(4) On the subject of militarism, will the convocation take notice of the definite assault by the militarists on the public schools and go on record against this? Harry Elmer Barnes says: "Now a drive is being made for a great

expansion of the R. O. T. C. in high schools, where junior units are to be established. Since it is a farce to expect the training of efficient officers in high schools, it is quite obvious that this latest move of the War Department is primarily a gesture of propaganda and military psychology."

Will the convocation address itself chiefly to preserving the four cornerstones of democracy outlined above or will it drift, as so often heretofore, into a discussion of various highbrow studies in no way conducive to democratic living?

RICHARD WELLING
NATIONAL SELF GOVERNMENT COMMITTEE, NEW YORK, N. Y.

SPECIAL CORRESPONDENCE

HIGHER EDUCATION IN CHINA

DURING recent years, higher education in China has made rapid progress. In spite of economic depression and foreign oppression, our people have determined to push ahead the educational work.

According to the 1934 survey, there are 110 institutions of higher learning in China, of which 41 are universities, 38 colleges and 31 junior colleges. Of these institutions, 28 are national, 31 provincial and 51 private. The number of college teachers is 7,100 and of officers 4,200; 75.5 per cent. of the faculty are full-time, and 39.8 per cent. of them are returned students. The number of students is 44,000, of which 5,100 are women, that is, 12 per cent. Seventy per cent. of the students are taking arts, law, education and commerce, and 30 per cent. are taking science, agriculture, engineering and medicine. The percentages of income and expenditures of institutions of higher learning are given in Table I.

TABLE I

Income	Per cent.	Expenditures	Per cent.
National revenue	31.45	Teachers' salaries	37.88
Provincial "	20.80	Officers "	14.61
Private sources	26.30	Wages for workers	12.42
Endowment	5.28	Equipment	19.5
Tuition	10.42	Special expenses	7.85
Miscellaneous	5.75	Attached organizations	4.32

In the past year (1934–35) the Central Government has appropriated $720,000 to subsidize private institutions for higher learning. The fund is distributed as follows:

University of Shanghai, $20,000; University of Nanking, $30,000; Ginling College, $12,000; Soochow University, $10,000; Nantung College, $35,000; Tatung University, $35,000; Futan University, $15,000; Kwanghua University, $15,000; Great China University, $15,000; Franco-Chinois University, $10,000; Tungya College, $5,000; Soochow School of Fine Arts, $6,000; Hangchow College, $8,000; Amoy University, $9,000; Fukien Christian College, $12,000; Hwanan College, $8,000; Kwangchow University, $6,000; West China University, $20,000; Lingnan University, $35,000; Kwangtung Peoples University, $14,000; Hunan-Yale Medical College, $35,000; Chunghwa University, $8,000; Central China College, $15,000; Boone Library School, $5,000; Chiaochu School of Technology, $35,000; Shansi Medical School, $15,000; Yenching University, $60,000; Catholic University, $10,000; Chaoyang College, $8,000; Nankai University, $40,000; Cheeloo University, $30,000.

The number of students in institutions of higher learning, according to the latest information available, is shown in Table II.

TABLE II

Province	Number of students	Population	Number of students per million people
Kiangsu	6,647	34,125,857	195
Kwangtung	5,844	32,427,626	180
Hopei	4,268	31,232,131	137
Chekiang	3,414	20,642,701	165
Liaoning	3,003	15,233,123	195
Szechuen	2,885	47,992,282	60
Fukien	2,609	10,071,136	261
Shansi	2,387	12,228,155	195
Anhwei	1,916	21,715,396	88
Shantung	1,857	28,672,419	65
Hunan	1,592	30,501,212	50
Kiangsi	1,346	20,322,837	66
Hupeh	1,302	26,699,126	49
Honan	1,236	30,565,651	40
Kwangsi	1,073	13,648,200	79
Kirin	865	7,634,671	113
Shensi	361	11,802,446	31
Yunnan	329	13,821,234	24
Heilungkiang	327	3,724,738	88
Kweichow	184	14,744,722	12
Kansu	164	6,281,186	26
Charhar	133	1,997,015	67
Suiyang	104	2,123,728	49
Jehol	84	6,593,440	12
Hsinkiang	54	2,551,741	23
Tibet	51	3,722,011	14
Ninghsia	25	1,449,867	17
Chinghwei	7	6,195,057	11
Hsikong	6	8,906,450	7
Mongolia	2	6,160,106	3

The present policy of the government is to raise the standard of the existing institutions. The regulations have been strictly enforced and several institutions have been closed for failure to conform with the standard requirements. Honorable Wang Shih Chieh, the minister of education, has just announced "the other points to be emphasized are as follows: (1) to develop science, agriculture, engineering and medicine but limit arts and law courses; (2) to raise the qualifications for faculty and academic standard for students; (3) to revise the curriculum and increase the science equipment; (4) to correlate the different institutions in the same area; (5) to abolish bad private institutions and subsidize good ones; (6) to establish scholarship funds to assist poor but worthy students; and (7) to raise the qualifications for students going abroad—only college graduates are allowed."

In the last few years, European influence has been stronger than that of the Anglo-Saxon. The process of nationalization of education is likely to go on with some vigor; and more strict standardization will probably be enforced. This policy will irritate progressive educators. What China needs is not a Europeanized nor Americanized but China-ized system of education. However, there are signs to show that the present maladjustment is only a transitional phenomenon. Many government educators realize the importance of educational experimentation and appreciate the special contribution of private education such as Christian colleges offer.

Higher education, Christian, private and government, will undoubtedly continue to play a very important part for the reconstruction of new China.

HERMAN C. E. LIU
SHANGHAI UNIVERSITY

QUOTATIONS

THE UNIVERSITY OF ROME

THE architecture of this new University City has its impassioned critics. Admirers congratulate themselves that the new university should have arisen when the epoch of debased baroque has passed away, and when such buildings as those of the regrettable Via Cavour and certain other modern thoroughfares are no longer being projected. On the other hand, not a few critics, while admitting that the 90,000,000 or so lire (about £1,600,000) assigned to the scheme left no margin for "frills," would have liked the buildings to have shown a rather greater variety of style. Taken as a whole, the University City must be judged a remarkable product of modern Italian architecture, and ungrudging praise should be given to the way in which the interiors of the various buildings have been planned to meet their several requirements.

It is primarily with a utilitarian purpose that the new University City has been created at last. As the years went by the university grew with the careless spontaneity of Topsy rather than upon any well-ordered plan. It was not uncommon for students engaged in the more specialized work known as *seminario* to be turned out of their room by a professor who claimed the right to lecture there. Students could be seen standing in the corridors and trying to follow a lecture given in a hall too small to hold all the class. Above all students and teachers wasted time and money in scurrying across Rome between the scattered buildings.

The remedies proposed for this unsatisfactory state of affairs were finally reduced to two. One strong body of opinion favored the so-called "tripartite" solution. Traditions were to be maintained by keeping the old Sapienza for the Faculties of Jurisprudence and Letters and the offices of the university, while the requisite institutes of medicine were to be built near the Polyclinic and the sciences were to be grouped on the Viminal. The alternative, to bring all the university buildings together near the Polyclinic, was finally accepted, save that the School of Applied Engineering remains in the Convent of San Pietro in Vincoli and the School of Architecture is established in the Valle Giulia just behind the British school. The conception of the University City goes back almost 50 years. But it is no mere coincidence that it should have been left to Signor Mussolini to make this gift to the Rome which he has done so much to revive and adorn.

The University City of Rome is to be inaugurated on Wednesday. It has been planned on a grand scale. Covering an area of about 40

acres, the site lies on the easterly outskirts of Rome alongside the road out to Tivoli. Of this area about one seventh will be occupied by the buildings themselves. The remainder will be taken up by courts, avenues, gardens and a sports ground. The new buildings have risen up in a neighborhood which already comprises such specially planned constructions as the vast Polyclinic, the new Dental Institute provided by the late Mr. Eastman, and the massive new Ministry of Air with its annexes.

The dominant note, perhaps, is austere utilitarianism. So much was, indeed, to be expected. The general direction and supervision were entrusted to the Royal Academician Marcello Piacentini, whose Ministry of Corporations in Rome, Law Courts in Messina, Monument to the Fallen in Genoa and other creations up and down Italy are typical embodiments of the new school of Italian architecture. Signor Piacentini has himself designed only the *rettorato,* or rector's lodge—if the word lodge can be applied to so grandiose a building. But his influence is clearly stamped upon all the work of his seven collaborators, and it is he who will be praised or criticized down the centuries for the general style of the city.

The main entrance, flanked by the Institutes of Hygiene and Orthopedia, lies through lofty pilasters crowned by an architrave bearing the inscription "Victorio Emanuele III Regnante Benito Mussolini Rem Italicum Moderante Vetus Urbis Studium In Hanc Sedem Romana Magnificentia Dignam Translatum Est." The road leading up to the central piazza is a broad avenue with flower beds and trees down the middle. On either side are the Institutes of Physics and Chemistry. Seven buildings—the Institute of Mineralogy, the School of Mathematics, the Faculties of Jurisprudence and Letters, the Rettorato and the Institutes of Physics and Chemistry already mentioned—abut on the central piazza.

The main feature of this grandiose mass of buildings is the imposing entrance leading to the study and reception rooms of the Rector, to the spacious ceremonial hall known as the *Aula Magna* and to the many administrative offices. Behind this main building come other institutes, such as those for Physiology and Botany, while set off at an angle are the *Casa dello Studente* and the Sports Ground.

In Rome, as in other Continental Universities, the college system of Oxford and Cambridge is unknown and the vast majority of the 7,000-odd students are external. Nevertheless, a number of students at Rome University need suitable and congenial accommodation, and the *Casa dello Studente* will, at the outset, provide lodgings, dining-rooms, studies and other conveniences for about 300.—*Rome correspondent of the London Times.*

SOCIETIES AND MEETINGS

THE ASSOCIATION OF AMERICAN UNIVERSITIES

"IN view of the critical situation facing the present system of post-doctoral fellowships," the Association of American Universities is presenting to its member institutions, to the scientific and learned councils and to the foundations a proposal for their cooperative support of a fellowship program which will continue and improve research in the higher educational system of America. The decision to undertake such a program was the culmination of the thirty-seventh annual conference of the association, held at Cornell University, Ithaca, N. Y., on November 7, 8 and 9. There were in attendance about forty delegates, representing thirty of the thirty-two member institutions.

The present situation and its critical aspects were set forth in two papers read at the afternoon session of November 8 by Dr. Frank R. Lillie, of the National Research Council, and by Dr. Karl T. Compton, of the Massachusetts Institute of Technology; and also in discussion in which the participants included President Ray Lyman Wilbur, of Stanford University (whose prepared comments were read by Dean Ralph H. Lutz); Dr. Waldo G. Leland, of the American Council of Learned Societies; Dr. Donald Young, of the Social Science Research Council; President George F. Zook, of the American Council on Education; Dean Guy Stanton Ford, of the University of Minnesota, and Dean Edgar S. Furniss, of Yale University.

"Training for productive scholarship is peculiarly a function of the universities," was the opening declaration of Dr. Lillie. There has been, he said, only one successful system of advanced training since learning began to be cultivated, "and that is the system of apprenticeship, in which the scholar cooperates with the teacher in study of particular problems—a relationship as beautiful as it is old."

Concerning ways and means for post-doctoral training, Dr. Lillie distinguished between two distinct kinds of endeavor as "institutional and supra-institutional. That is to say, on the one hand efforts made within any given institution to continue post-doctoral training with its own resources whether for its own students or others; and on the other hand efforts made by agencies outside of the universities as such, and often with reference to particular fields of learning." One of the most encouraging events in the entire movement of post-doctoral training for productive scholarship has been "the establishment of the Institute for Advanced Study under the leadership of Abraham Flexner with the generous endowment by Mr. Bamberger and Mrs. Fuld." But, Dr. Lillie continued, "in any comprehensive sense, training for advanced scholarship has larger requirements than any single institution can supply."

Discussing the administration of fellowships, Dr. Lillie cited the success of the British Science Research Scholarships, for which candidates are recommended by the governing bodies of universities and colleges and awards are made by a scholarship committee. "The pages of the lists of scholars sparkle with names that call up most fruitful contributions in the progress of science. . . . Up to 1930, 550 in all had been appointed and forty of their scholars were then on the rolls of the Royal Society." Dr. Lillie spoke also of the successful results of younger enterprises in the United States—the fellowship awards of the John Simon Guggenheim Memorial Foundation; the National Research Council on the basis of funds supplied by the Rockefeller Foundation; and post-doctoral fellowships administered directly by the Rockefeller Foundation and the General Education Board. He referred to the National Research Council fellowships as "a rather magnificent experiment in post-doctoral education," and cited opinions as to their value given by eminent scientists. "It is very important for the future of science in America," Dr. Lillie said in conclusion, "that the situation with reference to post-doctoral fellowships be stabilized."

The definite proposal which caused the association to act was put forth by President Compton in his paper, "A Proposed Program for the Support of Post-doctoral Fellowships." He began by referring to "the important point that our higher educational system is now faced with the alternatives of losing ground in this aspect of their program or else, by cooperative effort, providing for its continuation and improvement." Dr. Compton, in his presentation of "basic facts," described the system of National Research Fellowships which has been developed during the past fifteen years under financial support by the Rockefeller Foundation and "administered by the nation's most eminent research scholars operating through the National Research Council, the Social Science Research Council and the American Council of Learned Societies." Specific ways in which the universities have benefited by these fellowships were outlined. "We are indebted and grateful to the Rockefeller Foundation for its great contribution," said Dr. Compton.

"It appears certain," he continued, "that the foundation will not continue its support of this general program on the same scale and in the same way as in the past." Dr. Compton gave it as his own thought that the foundation "would wish to give some substantial help to an organized group of universities in maintaining a cooperative post-doctorate fellowship program, if they could agree upon a plan showing promise of success and permanence."

Dr. Compton then set forth a plan by which each cooperating university would agree to appoint to post-doctorate fellowships those candidates selected and recommended by a board of selection which would consider all applications throughout the country. Appointments should be for a two-year period, the fellowships to carry a schedule of stipends uniform in all institutions. The fellow would be expected to cooperate in the teaching or other work of the department, not exceeding one third of his working time. It was emphasized that this "should be a

plan of the universities, as represented by this association, rather than a plan of the councils offered to the universities."

The response to Dr. Compton's suggestions was most favorable and, at the business session on the morning of November 9, appointment was announced of a committee of the Association of American Universities to draft a plan along with the National Research Council, the Social Science Research Council and the American Council of Learned Societies, and then to solicit contributory support toward the plan from the Rockefeller Foundation or other sources.

BROAD PROBLEMS OF THE GRADUATE SCHOOLS

At the general session on the morning of November 8, two papers were presented on broad aspects of graduate study, the first by Dean R. G. D. Richardson, of Brown University, and the second by President Walter A. Jessup, of the Carnegie Foundation.

Under the title "The Present Need for a Constructive Review of Graduate Schools," Dean Richardson dealt with "the new problems and requirements of the immediate future." He defined the functions of a university, stressing its tradition of "devotion and vigor in the search for truth and impartiality in reporting the results of that search. The university must make it clear to the world that there can be no short cuts to peace and prosperity, no circumvention of the laws of the universe, and no substitute for straight thinking." He felt that "in the increasingly complex organization of society, the service of the graduate school must grow ever broader and deeper."

Dean Richardson presented evidences of his thought that American universities are now in a transition stage: "The slackening of the rate at which new funds for development of advanced instruction and research become available and the realization that in some cases there has been over-expansion; the turn of the tide of advanced students which in former days flowed *from* America *to* Europe; the increasing number of colleges in which the students during their junior and senior years are being given a well-rounded training . . .; the growth of post-doctoral study; the establishment of separate institutes for research."

Among the university problems which Dean Richardson listed as needing attention were these: Making the aims of the university known to the public; interpretation of the statistics of college and graduate school enrolment; the adjustment of supply and demand in trained men; are the best student minds being enlisted for advanced study?; types of graduate students; the relation of degrees to types of training; and fellowships. All these considerations suggest the need for "a critical review of the whole problem of graduate instruction." This should be done, Dean Richardson thought, on a scale comparable with the important investigations of earlier years, such as those of medical and legal education conducted by the Carnegie Foundation for the Advancement of Teaching.

GRADUATE WORK AND SOCIAL NEEDS

In following Dean Richardson, President Walter A. Jessup, of the Carnegie Foundation for the Advancement of Teaching, said he felt that "the needs and standards of American graduate work have been debated before this association for a third of a century" and that, upon the principles already established, "the road is open to any school or group of schools to assume such leadership as is indicated by its resources in men and ideas." He agreed with Dean Richardson that the problems cited are very real, including "new graduate questions which have arisen with the passing of the years and the constant expansion of organized education into new fields." President Jessup specified the new fields of library science, physical education, music, art, dramatics, home economics, journalism, commerce and religion. "We may expect not fewer graduate schools and fewer graduate departments and fewer graduate degrees, but an enormous increase in the social demand for graduate work, under one label or another."

To his own question, "How did we get this way?" President Jessup replied in a way which gave an admirably succinct review of college and university development in this country. One paragraph of this was as follows:

> The early New England settler insisted upon a program of education—this with a religious sanction. Later Jefferson insisted on a program of education with a political sanction. This explained

the creation and support of the state universities as a cap sheaf on a program of public education. Following the Civil War came a recognition of education with an economic sanction. Technical schools flourished. Gradually the church, the state and industry have thus come to depend upon the school.

No clear understanding of the problems of graduate work is possible, said President Jessup, without something of an appreciation of the social forces which have come to bear upon all levels of education. "Through a common set of social pressures our schools are, in effect, a unit." He sketched the picture: elementary schools that register more than twenty million children; the high school and preparatory school with more than six million students; "a thousand institutions that are called colleges . . . half as many called junior colleges . . . together registering more than a million students." He spoke of special schemes of teaching in great industrial organizations. "In addition to all this we now have adult education forums proposed on a grand scale. . . . As our society is organized, we 'believe in education' at any and all levels, irrespective of the details."

President Jessup recounted the development of the relations between schools and colleges, such as the certificate plan of admission and the credit plan of progress in college and university. "These working arrangements have had an enormous effect upon the colleges." Numerous quotations were given of opinions and actions which President Jessup had culled in reading the proceedings of the Association of American Universities from 1901 to date. Extracts from the latter part of Dr. Jessup's paper follow:

> Graduate education has extended, in response to social pressures, to include not only the traditional leading universities but also some two hundred other institutions. The number is increasing every hour. . . .
>
> Both the college and the secondary school lament the fact that they have been caught in the lockstep of large classes, with units and credits as markers. The graduate school, reasonably free from the worst of these abuses, could shake itself free from all of them without difficulty. . . .
>
> Were any five of the members of this association deliberately to branch out and develop graduate work on the highest level of which it is capable, by selecting students who are capable of doing the best job possible within the limits of their resources of personnel, the nature of institutional imitation is such that we should quickly have other institutions following in their footsteps.

Among those who took part in the discussion of President Jessup's paper were Dr. A. O. Leuschner, of the University of California; Dean L. P. Eisenhart, of Princeton University, and Dean Guy Stanton Ford, of the University of Minnesota.

Deans' Conferences

Six main topics were presented by a total of nine speakers at the conferences of deans and similar officers of graduate schools, held on the afternoon and evening of November 7. These included a paper "Honors Work and Graduate Study," read by President Frank Aydelotte of Swarthmore College, where honors work has been conducted since 1922. Other papers and speakers were: "Recording the Work of Graduate Students," Dean William McPherson, Ohio State University, and Dean C. E. Seashore, State University of Iowa (whose paper was read by Dr. G. D. Stoddard; "Migratory Students," Dean J. C. Metcalfe, University of Virginia; "Organization of a Graduate School within the University," Dean W. W. Pierson, Jr., University of North Carolina, and Dean H. Lamar Crosby, University of Pennsylvania; "The Relation between Graduate and Undergraduate Work," Dean R. M. Ogden, Cornell University; "The Comprehensive Examination," Dean L. P. Eisenhart, Princeton University, and Dean E. B. Stouffer, University of Kansas.

Other Sessions

The delegates and guests of the association were guests of Cornell University at luncheon and dinner on November 8. President Livingston Farrand extended the welcome of Cornell, both at the opening conference and at the dinner. Dean F. K. Richtmyer, of Cornell, presided at all sessions, and was toastmaster. Other dinner speakers were: President George F. Zook, of the American Council on Education; Dean Ford, of the University of Minnesota, and Dean George S. Brett, of the University of Toronto.

Reports of standing committees and of special committees were presented at the business

session held on the morning of November 9. A report was made by Dean Edgar S. Furniss, of Yale University, secretary of the association.

Upon recommendation of the Committtee on Classification of Universities and Colleges presented by Dean Fernandu
University, four institutior
approved list of the associ

lege, Montevallo, Ala.; Capital University, Columbus, Ohio; College of the Sacred Heart, New York City, and Skidmore College, Saratoga Springs, N. Y.

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ACTIVITIES OF THE FOUNDAT

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Max Mason, president of
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> The decisions reached during the year 1934 as to program in the immediate future bring increased emphasis on special fields, and on realistic research designed to meet definite and clearly recognized needs.
>
> The Foundation proposes to continue its traditional work in public health, studying, through its field and laboratory staffs, diseases and the control of diseases in their environments, and giving assistance to governmental activities and to the training of personnel.
>
> In the field of medical science the major interest will continue to be mental health, and support will be given for research and its applications, as well as for the training of personnel. A secondary interest will be the training of medical students in hygiene and public health.
>
> In the natural sciences support will be given, as in recent years, to studies in the broad field of area of public appreciation and participation, and of fostering international cultural understanding. Opportunities of importance seem to exist through the plans of the public school system for adult community work in cultural subjects, through certain activities of museums and libraries, and through the work of a few important centers which are developing the drama as a school, college, and community activity. The vast general fields of the radio broadcast and motion pictures will also receive consideration, since well-organized efforts for their greater cultural effectiveness appear to be valuable and in need of support.

Public Health

Operating on a budget of $2,200,000 for public health activities, The Rockefeller Foundation in 1934 engaged in field research on yellow fever, malaria, hookworm disease, tuberculosis, undu-

lant fever, yaws and diphtheria; conducted yellow fever surveys and control campaigns; carried out projects in malaria control, supported numerous demonstrations of complete public

Grants for work in psychiatry were made to McGill University for research and teaching; to the Massachusetts Department of Mental Diseases for studies in psychiatry at the Boston

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fever not carried by that mosquito and therefore offering to the scientific investigator new and as yet unsolved problems.

Medical Sciences

The total amount appropriated during the year for work in the medical sciences was $1,026,200. Aid of four types was given for the advancement of psychiatry: grants to universities and other institutions for the development of research and teaching in psychiatry and associated subjects; endowment and building funds for establishing psychiatric departments; research aid grants to individual workers engaged in important investigations in mental diseases, and fellowships to enable men and women especially qualified for work in this field to obtain desirable advanced training.

The program called for specific concentration in the fields of experimental and physicochemical biology, and included appropriations to: Amherst College, for research in biology; New York State College of Agriculture, Cornell University, for the support of a maize stocks clearing house; American Society of Naturalists, Carnegie Institution Laboratory at Cold Spring Harbor, Long Island, for a *Drosophila* stock center; Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, for research in mammalian genetics; Harvard Medical School and Massachusetts Institute of Technology, for carrying out investigations in spectroscopic analysis of blood serum in anemia; Leland Stanford, Jr., University, for work in chemophysical biology; McGill University, Departments of Neurology and Physics, for research in spectroscopic

session held on the morning of November 9. A report was made by Dean Edgar S. Furniss, of Yale University, secretary of the association.

Upon recommendation of the Committtee on Classification of Universities and Colleges presented by Dean Fernandus Payne, of Indiana University, four institutions were added to the approved list of the association: Alabama College, Montevallo, Ala.; Capital University, Columbus, Ohio; College of the Sacred Heart, New York City, and Skidmore College, Saratoga Springs, N. Y.

The association decided to hold its 1936 conference at the University of Texas.

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REPORTS

ACTIVITIES OF THE ROCKEFELLER FOUNDATION

PROGRAMS AND POLICIES

THE Rockefeller Foundation expended $12,679,775 during the year 1934, according to its annual report, which has just been published. In commenting upon the activities of the year, Max Mason, president of the foundation, said in part:

The determination of sound Foundation procedure in the application of funds to the well-being of man becomes unusually difficult when increased opportunity and need coincide with diminished resources. Such a situation, at a time of rapid change in world conditions, demands the careful thought of those responsible for the selection of the fields and methods of work which promise to yield the most tangible and lasting benefits. These have been the preoccupying considerations for the trustees and executive officers of The Rockefeller Foundation during the past year.

The decisions reached during the year 1934 as to program in the immediate future bring increased emphasis on special fields, and on realistic research designed to meet definite and clearly recognized needs.

The Foundation proposes to continue its traditional work in public health, studying, through its field and laboratory staffs, diseases and the control of diseases in their environments, and giving assistance to governmental activities and to the training of personnel.

In the field of medical science the major interest will continue to be mental health, and support will be given for research and its applications, as well as for the training of personnel. A secondary interest will be the training of medical students in hygiene and public health.

In the natural sciences support will be given, as in recent years, to studies in the broad field of modern analytic biology, directed towards the understanding of physical and mental growth and development.

In the field of social science aid will be given for objective studies on selected problems of realistic importance in social control, through the methods of direct factual study, training of personnel, and basic research. In many such fields, the work is beset with great difficulties, but the stakes are so large that their attainment is worthy of tremendous effort. International relations form a case in point. Objective studies in the problems relating to economic security will be fostered, both those relating to the business cycle and those arising from attempts to ameliorate the effects upon the individual of economic instability. A third general field of interest will be that of public administration. The field of criminology presents problems for combined attack from the angle of the behavior problems of the individual and problems of public administration.

The work in the humanities will consist of efforts in selected types of cultural activities permitting practical application, with the aim of extending the area of public appreciation and participation, and of fostering international cultural understanding. Opportunities of importance seem to exist through the plans of the public school system for adult community work in cultural subjects, through certain activities of museums and libraries, and through the work of a few important centers which are developing the drama as a school, college, and community activity. The vast general fields of the radio broadcast and motion pictures will also receive consideration, since well-organized efforts for their greater cultural effectiveness appear to be valuable and in need of support.

PUBLIC HEALTH

Operating on a budget of $2,200,000 for public health activities, The Rockefeller Foundation in 1934 engaged in field research on yellow fever, malaria, hookworm disease, tuberculosis, undu-

lant fever, yaws and diphtheria; conducted yellow fever surveys and control campaigns; carried out projects in malaria control, supported numerous demonstrations of complete public health programs; gave aid to the organization or maintenance of essential services of state and national health departments, and continued its contribution for the training of public health personnel through aid to schools and institutes of hygiene and public health as well as by support of a fellowship program.

As a general result of technical methods, developed in the laboratory, it has become evident that there are two endemic areas of yellow fever in the world. The boundaries of these areas have been approximately established. One of them occurs in Africa and extends from Senegal in West Africa to the upper reaches of the Nile. The other occurs in South America and occupies practically the whole of the Amazon Valley, reaching for short distances into other watersheds.

It has come to be recognized that yellow fever may exist not only in a mild and almost unrecognizable form, but also in forms not associated with its recognized carrier, the stegomyia mosquito. The disease is transmitted and perpetuated in certain endemic areas by vectors different from the single one (stegomyia mosquito) encountered in Habana, Panama and epidemic cities in general. Within these endemic areas, large parts of which are covered by jungle, there occurs a type of jungle yellow fever not carried by that mosquito and therefore offering to the scientific investigator new and as yet unsolved problems.

Medical Sciences

The total amount appropriated during the year for work in the medical sciences was $1,026,200. Aid of four types was given for the advancement of psychiatry: grants to universities and other institutions for the development of research and teaching in psychiatry and associated subjects; endowment and building funds for establishing psychiatric departments; research aid grants to individual workers engaged in important investigations in mental diseases, and fellowships to enable men and women especially qualified for work in this field to obtain desirable advanced training.

Grants for work in psychiatry were made to McGill University for research and teaching; to the Massachusetts Department of Mental Diseases for studies in psychiatry at the Boston State Hospital; to the Worcester State Hospital, Massachusetts, for research on dementia praecox; to the Johns Hopkins University, for the development of child psychiatry in the Pediatric Clinic; to the University of Leiden, for child psychiatry; to the Chicago Area Project, for the study, treatment and prevention of juvenile delinquency within a few selected areas in Chicago; to the University of Rochester, for the Child Guidance Clinic; to the National Committee for Mental Hygiene, towards support of its general expenses during 1935; to the University of Colorado, for the teaching of psychiatry in the Medical School; to the University of Michigan and the Institute of the Pennsylvania Hospital, for the development of teaching and research in psychiatry.

For work in neurology and related subjects, gifts were made to New York University, to Northwestern University Medical School, the University of Pennsylvania, the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne, Australia; Dartmouth College, and the Lister Institute of Preventive Medicine, London.

Natural Sciences

In the field of the natural sciences, appropriations made during 1934 amounted to $1,051,210. The program called for specific concentration in the fields of experimental and physicochemical biology, and included appropriations to: Amherst College, for research in biology; New York State College of Agriculture, Cornell University, for the support of a maize stocks clearing house; American Society of Naturalists, Carnegie Institution Laboratory at Cold Spring Harbor, Long Island, for a *Drosophila* stock center; Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, for research in mammalian genetics; Harvard Medical School and Massachusetts Institute of Technology, for carrying out investigations in spectroscopic analysis of blood serum in anemia; Leland Stanford, Jr., University, for work in chemophysical biology; McGill University, Departments of Neurology and Physics, for research in spectroscopic

biology; University of Chicago, to widen the scope of spectroscopic methods as applied to biological problems; University of Michigan, for research in biophysics; University of Uppsala, Sweden, for conducting research in the physicochemical properties of proteins; California Institute of Technology, for research in chemistry; Columbia University, to aid in conducting researches on the biological effects of heavy hydrogen; Columbia University, for research in the physiology of sex; National Research Council, for projects under the Committee for Research in Problems of Sex; Ohio State University, for research in endocrinology; State University of Iowa, for research in cellular physiology; University of Rochester, for studies on the physiology of reproduction; University of Wisconsin, for research work in endocrinology; University of Michigan, to conduct studies on the physiology of respiration.

SOCIAL SCIENCES

The social science program for 1934 involved appropriations amounting to $1,164,690.

In the field of economic planning and control an appropriation was made to the University of Pennsylvania for the Industrial Research Department of the Wharton School of Finance and Commerce.

Appropriations in the field of international relations included interim grants to the Foreign Policy Association for the support of its research department; to the American Geographical Society for the completion of its millionth map of Hispanic America, and to the American Council of the Institute of Pacific Relations for its general expenses. All these projects had received assistance in 1933. An additional grant was made to the Foreign Policy Association for a study of Cuban economic and social conditions.

The largest grant in the field of community organization and planning went to the Welfare Council of New York City, which received $75,000 for the budget of its Research Bureau. Other appropriations were made to the New Hampshire Foundation and the Community Council of Philadelphia for their research programs.

Appropriations for work outside the fields of international relations and community planning included support of institutional centers for research and advanced training. The following institutions received grants during the year: Institute for Research in the Social Sciences at the University of Virginia, the American University of Beirut, Yenching and Nankai universities, both in China, and the universities of Chicago, Stockholm, Oxford and Paris. Several schools of social work continued to receive assistance from the foundation under its former program, new grants being made to the School of Applied Social Sciences of Western Reserve University and to the School of Social Service Administration of the University of Chicago. Although the foundation plans to withdraw from the field of cultural anthropology, it made new grants to institutions which had been recipients of previous appropriations: Columbia University, Tulane University and the University of Chicago.

In addition to the program in the social sciences mentioned above, appropriations amounting to $525,500 were made in connection with emergency grants in support of: (1) Studies providing for concurrent recording and appraisal of procedures in important sections of the Federal Government's recovery, relief and reconstruction programs; and (2) undertakings providing collaboration on the part of private agencies with programs, new in type or scale, of federal, state and local governments.

THE HUMANITIES

During 1934 the foundation's appropriations in the field of the humanities totaled $749,500. The program of specific concentration confined itself to two fields of operation: the improvement of international understanding through cultural interchange and the preservation and interpretation of American cultural traditions.

The American Council of the Institute of Pacific Relations received two appropriations from the foundation during 1934 for the development in American universities of instruction in Russian language and literature, and an appropriation for similar work in Chinese and Japanese was made to Columbia University, these projects all being conceived as part of a plan for wider Far Eastern studies. Grants supplementing former assistance were made to the Bodleian Library at the University of Ox-

ford and to the Bibliothèque Nationale in Paris in connection with the publication of its general catalogue.

Toward the preservation and interpretation of American cultural traditions the foundation appropriated funds to the American Council of Learned Societies for its "Dictionary of American Biography," and to the University of Chicago for the preparation of the "Historical Dictionary of American English." The Library of Congress received an additional grant of $20,000 for the collection of photographic copies of source materials for American history from national archives and various European libraries. The Virginia Historical Society also received supplementary funds for the preparation of its "Virginia Historical Index." In the field of dramatic art grants were made to Yale University and the State University of Iowa. Studies in Hispanic-American culture were financed at the universities of Texas and New Mexico and additional funds were provided for interpretative studies of Indian art at the Laboratory of Anthropology, in Santa Fe.

EDUCATIONAL RESEARCH AND STATISTICS

LONG-TIME EFFECTS OF TRAINING COLLEGE STUDENTS HOW TO STUDY

STUDENTS whose high-school work has been mediocre or inferior in quality but who nevertheless wish to pursue college courses constitute a serious problem in educational guidance. A number of attempts have been made to meet this issue by affording such individuals special training in study techniques designed to raise the level of their college performance. The success of these "how to study" courses has usually been evaluated at the conclusion of a semester or year, probably too short a period to assess any enduring values of such training. In the present report results on one of the pioneering efforts in this field—the University of Buffalo study course—are presented nine years after its initiation, making it possible to determine how far these students have progressed in their college and professional school careers and with what degree of success.[1]

The Buffalo study course, which has been described in detail elsewhere,[2] has been required of all students who rank in the lower quintiles of their high-school graduating classes (lower two fifths for city high schools, and lower three fifths for smaller schools), and who wish to enter the University of Buffalo. The course is given in a three-week period preceding the opening of college and includes drill in English composition, reading, note-taking, library reference work and an introduction to the fundamental concepts in the social and physical sciences. Extensive testing and individual conferences supplement the regular class work. At the conclusion of the course a few students are debarred from college, while doubtful cases are recommended for reduced schedules.

SELECTION OF CONTROL GROUP

In two earlier studies of the success of the procedure, Jones found that trained students achieved at a higher level and remained in college a longer time than untrained students who had entered the university from the lower fifths of their class before this course requirement was in operation. The large number of cases included in the present study, however (296 students who took the course in the years 1926–31), as well as sweeping changes during this period in college curricula and instructional methods, made it inadvisable to select controls from earlier years. As a result exact controls could not be obtained, since every student from these lower levels had to take the course. The nearest approach, therefore, was to match each trained student with an untrained student who was alike in every respect except that his high-school achievement was just above the criterion line. As Table I shows, the agreement was exceedingly close on age, type of high school attended, aptitude and achievement test scores and curriculum, and this similarity holds for individual cases as well as group comparisons.

The Regents' averages of the two groups differ significantly (6.90 S.E.), showing that this mea-

[1] For a more complete discussion of the present results, see R. E. Eckert and E. S. Jones, *Univ. of Buffalo Studies*, Vol. X, No. 2, June, 1935.

[2] E. S. Jones, *University of Buffalo Studies*, Vol. V, No. 3, April, 1927, and Vol. VIII, No. 1, February, 1930.

TABLE I

A COMPARISON OF STUDY AND CONTROL STUDENTS ON THE VARIOUS MEASURES USED IN MATCHING AND ON REGENTS' EXAMINATION ACHIEVEMENT*

Measure	Percentages (296 cases each) Study	Control	Measure	Study Mean	Study S.D.	Control Mean	Control S.D.
Sex			*Age at entrance*				
Men	85.5	85.5	Total group	18.9	1.5	18.7	1.3
Women	14.5	14.5					
Type of high school			*Iowa High School Content Exam.* (centile scores)				
Buffalo	57.4	54.8	Total group	43.3	25.5	41.4	27.2
Out-of-town	34.8	39.2					
Private	7.8	6.1	*Am. Council Psychological Exam.* (centile scores)				
Curriculum			Total group	42.4	26.9	42.4	26.9
Pre-dental	13.8	11.1					
Pre-medical	23.0	25.7	*Regents' Average* (not matched)				
Pre-engineering	2.2	2.2	Total group	74.7	3.6	76.5	3.7
Pre-legal	15.2	14.5					
Bus. Admin.	28.4	28.4					
Arts	17.6	18.2					

* To conserve space, results are not given for each year group, but the various measures were closely similar for these smaller groups as well as for the total populations.

sure of examination performance, like high-school rank to which it is closely related, has not been equated and must be allowed for in the interpretation of results. While the present control students are closely similar in scholastic aptitude to the experimental group, they seem to have an advantage over the study students in their conscientious effort to satisfy school requirements. An interesting point, however, is that the control group achievement is well below that of the average student in the lowest fifths admitted without the course. In other words, the present controls escaped the requirement by a very narrow margin and represent the lowest group admitted to college without special training.

JUNIOR COLLEGE ACHIEVEMENT

The first analysis of the progress of the "how to study" and control groups in college was based on grade-point average for the freshman year. The results, as given in Table II, favor the control group, although only in 1927 does the difference approach statistical reliability. For the entire period the study students tend to lag about a fourth of a grade-point behind their controls, the difference being somewhat greater for the first three years and smaller more recently. When the total groups are compared, the difference is significant (3.96 S.E.), but less than that obtained on measures of high-school achievement, apparently indicating that the course has operated to decrease the gap between the two groups.

TABLE II

A COMPARISON OF STUDY AND CONTROL STUDENTS ON THE BASIS OF JUNIOR COLLEGE ACHIEVEMENT

Year	N*	Study Group Mean	Study Group S.D.	Control Group Mean	Control Group S.D.
Freshman Year					
1926	32	3.42	.70	3.71	.79
1927	40	3.10	.61	3.50	.61
1928	45	3.16	.70	3.42	.82
1929	55	3.20	.85	3.40	.81
1930	56	3.42	.64	3.56	.77
1931	68	3.60	.56	3.77	.59
Sophomore Year					
1926†	19	3.65	.60	3.75	.77
1927	26	3.44	.42	3.90	.82
1928	27	3.63	.67	3.85	.73
1929	28	3.43	.57	3.92	.67
1930	20	3.72	.52	3.90	.70
1931	24	3.88	.59	3.92	.51

* The number of cases indicates the pairs at the beginning of the year. There are slight variations between the groups due to the fact that occasionally students dropped out before final grades were in.

† Those who entered college in 1926, rather than those who did sophomore work that year.

Comparisons were also made on achievement in specific subjects in order to see whether the preliminary training period had brought the study group closer to the performance of their controls in certain fields than in others. In every instance the control group surpassed the trained students and, with a few exceptions, the gap between the groups is surprisingly constant from one subject to another and from the first semester to the second. Mathematics, economics and general science showed the nearest approach to equality of achievement, whereas study students were clearly outstripped in European history and chemistry. Notwithstanding the fact that the trained students had spent much time

in intensive drill in English composition, the difference between the groups in this field closely parallels the average difference for other freshman courses.

An investigation of sophomore year progress was complicated by the withdrawal or dismissal from college of either the "how to study" or control member of the pair. In Table II, therefore, only complete pairs—both members entering upon a second year of work—have been retained for analysis. Again the control group shows a consistent superiority, with the average grade of the experimental group still about a fourth of a point below that of the untrained group. It is interesting that the two years show similar trends, negating any assumption that the cumulative effects of practicing certain study techniques might become evident in a measure of achievement taken at a later date. However, with these cases, at least, there is no sign of deterioration of the study group during the sophomore year.

SUCCESS IN THE SENIOR COLLEGE AND PROFESSIONAL SCHOOLS

Since these students expected to take arts or professional school degrees, a study of their success in attaining this objective affords one of the most critical indices of the values of the training procedure. A first survey of persistence in college, based on the curriculum in which the student enrolled at the time of entrance, showed that study students were more likely to persevere in certain curricula than in others. Thus the experimental group fared as well as the control group in business administration, whereas in medicine the mortality was almost twice as great for the former group, a difference which is due in part to the fact that doubtful students are not so likely to be admitted to the medical school as to other divisions. The point that stood out most strikingly, however, was that in both groups only three or four of every ten students had completed advanced courses, senior college or professional, for which they originally enrolled, or were in the process of doing so. Such a situation would not be so disturbing if the remaining students had selected a new vocational objective and persisted in that field, but such shifting accounts for only about a tenth of the original group.

TABLE III

A COMPARISON OF THE PRESENT STATUS OF THE STUDY AND CONTROL GROUPS

Curriculum	Received degree		Still in training		Left College: Scholarship†		Left College: Other reasons	
	S	C	S	C	S	C	S	C
Arts*	16	26	10	8	47	25	71	68
Business Ad..	22	25	13	8	15	13	32	36
Dentistry ..	7	8	7	6	3	1	3	2
Law	13	14	8	10	3	2	1	4
Medicine ...	5	15	15	20	1	1	1	1
Pharmacy ..	1	3	..	..	..	..	1	..
Total group	64	91	53	52	69	42	110	111

* Students enrolled in the pre-professional curricula are included in the arts group until the time of transfer to the professional unit.

† The mortality assigned to low scholarship is at a minimum in this table, for a student's failure to return has been assigned to this category only as there was definite committee action concerning his record.

A closer analysis of the present status of the two groups is presented in Table III. Although the basis of classification here is the division in which the student was enrolled at the time of leaving college, the pattern is very similar to that obtained when groups are compared according to the curriculum originally elected. Thus, of the original group of study students, only five have received degrees in medicine with fifteen more in training, in contrast to fifteen of the control students who have completed the course and twenty more still in medical school. In law, dentistry and business administration, the percentages of complete and incomplete records are not very different for the two groups, but in arts the control students again show a definite advantage. Significantly more study students are dropped for scholastic reasons, while the proportions which resign college work for other causes are practically identical for the two groups.

Comparisons on quality of work in the upper years of the arts college and in professional schools favored the control group in eleven of the fourteen situations studied. In the other three instances the number of cases in the control group was so much greater than those in the experimental group that more rigorous initial selection probably explains the departure from the usual trend. While the differences in favor of the control group are not statistically significant when taken singly, the direction of these differences, supported by similar trends for the junior college period, affords considerable basis

for stating that training in study techniques does not entirely compensate for higher quintile ranking at entrance to college. Apparently a difference exists in scholastic attitude or work habits that a three-weeks course can not change fundamentally.

Factors Underlying Differential Achievement

Inasmuch as some students having study course training made creditable records while others failed completely in their attempt to do college work, the characteristics of students who survived the freshman year in good standing were investigated. A study of such factors as scholastic aptitude test rating, age, type of high school attended and curriculum elected in college indicated that an individual's chances of success varied considerably according to his position on these measures. Thus if he was older than the average student at entrance, below the median of the group on intelligence tests and received his training in a small high school, his chances of success in college were less than one in four, whereas the student who was bright, young and above the average of the study group on Regents examinations had about three chances in four of surviving the freshman year in good standing. Probability tables worked out on this basis show rather strikingly the influence of other factors than position in high-school class on college persistence, and open up the possibility of improving the estimation of achievement by taking into consideration a number of aspects of the student's life.

Summary and Conclusions

An evaluation of the educational progress of students who entered college from the lower fifths of their high-school classes and completed a course in study techniques was complicated by the lack of adequate controls. However, to afford some index to the efficacy of the procedure, their college achievement was contrasted with that of students matched on all pertinent factors except high-school performance. On this measure the "control" group ranked sufficiently above the study group to escape the course requirement but were inferior to the average student from the lowest quintile admitted without special study training. The following trends appeared in an analysis of the university careers of these experimental and control students.

(1) The study students ranked about a fourth of a grade-point below the control group in freshman and sophomore year achievement. This difference is less than that evident on pre-course measures, such as high-school Regents examinations, suggesting that the training has tended to reduce the gap between the two groups.

(2) Achievement in specific subjects closely approximates the trends shown by grade-point averages. The study group ranked no higher in English, a subject for which special drills had been given, than in other courses.

(3) The control group shows an advantage with respect to persistence in college and professional schools, and the same trends hold for quality of achievement in these upper years.

(4) Six out of every ten study students drop out of college without receiving a degree and five out of ten control students do likewise. An analysis of factors related to differential achievement indicates that data on such points as Regents achievement, intelligence test scores, age and previous educational history may profitably supplement fifth of class in determining entrance to such a course and aptitude for college work.

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NEW BOOKS IN EDUCATION

Andrews, Benjamin R. *Economics of the Household.* Revised edition. Pp. ix + 626. Macmillan. $3.50.

Beaty, John Y. *Story Pictures of Farm Foods.* Pp. 192. Illustrated. Beckley-Cardy. $0.70.

Brown, Zaidee and others, Editors. *Abridged High School Catalog: A Selection of 1,200 Books.* Pp. xii + 301. H. W. Wilson.

Parr, Frank W. *A Manual for Learning How to Study Efficiently.* Third edition. Pp. 138 + 25. Co-op Book Store, Corvallis, Oregon.

Paschal, George W. *History of Wake Forest College.* Vol. I, 1834–1865. Pp. 689. Wake Forest College, North Carolina. $5.00.

Seybolt, Robert F. *The Private Schools of Colonial Boston.* Pp. 116. Harvard University Press, Cambridge. $1.50.

Sutton, Roberta B. *Speech Index: An Index to 64 Collections of Famous Speeches and Orations.* Pp. 272. H. W. Wilson.

Warden, Carl J. and others. *Comparative Psychology: A Comprehensive Treatise.* Vol. I, *Principles and Methods.* Pp. 516. Illustrated. Ronald Press. $4.50.